THE STATE OF

TEACHER DIVERSITY

IN AMERICAN EDUCATION

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ALBERT SHANKER INSTITUTE

The State of Teacher Diversity in American Education

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EXECUTIVE SUMMARY

More than 60 years after the ruling in *Brown v. Board of Education* was handed down, its promise remains unfulfilled. In many respects, America's public schools continue to be "separate and unequal." Indeed, the growing re-segregation of American schools by race and ethnicity, compounded by economic class segregation, has become the dominant trend in American education.

Recent research documenting this growing school segregation has received some public attention (though arguably less than such a weighty matter should command).[1] Comparatively little attention has been paid to an important related issue, however—the state of racial and ethnic diversity in America's teaching force. For the general public, basic facts about teacher diversity remain inaccessible and even somewhat mysterious. This report was undertaken to draw attention to this issue and provide a factual basis for public discussion and further research.

TEACHER DIVERSITY IS AN EDUCATIONAL CIVIL RIGHT FOR STUDENTS

Existing research in the fields of education, social psychology and sociology make a compelling case for the benefits of a diverse teacher force, in which "minority" racial and ethnic groups—Blacks, Hispanics, American Indians, Asians and Pacific Islanders[2]—would be much more robustly represented (Section II). While there is reason to believe that Black, Hispanic and American Indian students would be the greatest beneficiaries of a diverse teaching force, there is evidence that all students—and our democracy at large—would benefit from a teaching force that reflects the full diversity of the U.S. population. The research finds that:

- Minority teachers can be more motivated to work with disadvantaged minority students in high-poverty, racially and ethnically segregated schools, a factor which may help to reduce rates of teacher attrition in hard-to-staff schools.

- Minority teachers tend to have higher academic expectations for minority students, which can result in increased academic and social growth among students.

- Minority students profit from having among their teachers individuals from their own racial and ethnic group who can serve as academically successful role models and who can have greater knowledge of their heritage culture.

- Positive exposure to individuals from a variety of races and ethnic groups, especially in childhood, can help to reduce stereotypes, attenuate unconscious implicit biases and help promote cross-cultural social bonding.

- All students benefit from being educated by teachers from a variety of different backgrounds, races and ethnic groups, as this experience better prepares them to succeed in an increasingly diverse society.

TEACHER DIVERSITY: THE NATIONAL PICTURE

At the national level, progress is being made toward a more diverse teaching force, but at a relatively modest pace (Section III).

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1 Of particular note in this regard is the important work on school segregation by the Civil Rights Project at UCLA (http://civilrightsproject.ucla.edu).

2 See "A Word on Nomenclature" at the end of this summary.

- Over the 25-year period from 1987 to 2012, the minority share of the American teaching force—including Black, Hispanic, Asian and Pacific Islander, American Indian and multiracial teachers—has grown from 12 percent to 17 percent.[3]

- The minority share of the American student population also grew during these 25 years, albeit not at the same tempo as increases among minority teachers. Minority students now account for more than half of all public school students.

- As a consequence of the growing minority student population, however, progress toward reducing the substantial representation gaps between minority teachers and students has been limited. Minority teachers remain significantly underrepresented relative to the students they serve.

- The most significant impediment to increasing the diversity of the teacher workforce is not found in the recruitment and hiring of minority teachers: Nationally, minority teachers are being hired at a higher proportional rate than other teachers. Rather, the problem lies in attrition: Minority teachers are leaving the profession at a higher rate than other teachers.

- Minority teachers are not evenly distributed across schools: They tend to be concentrated in urban schools serving high-poverty, minority communities. But analyses of survey data show that minority teachers are not leaving the profession at a higher rate because of the poverty or the race and ethnicity of their students but because of the working conditions in their schools. The strongest complaints of minority teachers relate to a lack of collective voice in educational decisions and a lack of professional autonomy in the classroom.

TEACHER DIVERSITY IN NINE CITIES

- The nine cities studied in this report—Boston, Chicago, Cleveland, Los Angeles, New Orleans, New York, Philadelphia, San Francisco and Washington, D.C.—followed the national patterns of teacher diversity in their broadest strokes (Section IV). As a general rule, minority teachers—especially minority male teachers—are underrepresented in these urban workforces, with substantial representation gaps between minority teachers and minority students.[4] These patterns are generally more manifest for Black and Hispanic teachers than for Asians, and more pronounced in charter schools than in district schools.

- When examining teacher diversity trends over the course of the 10 years in our study—from 2002 to 2012—a number of disquieting trends become evident. In every one of the nine cities studied, the Black share of the teacher workforce declined, at rates from the very small to the quite large—from roughly 1 percent in Boston's charter sector and Cleveland's district sector, to more than 24 percent in New Orleans (combined sectors) and nearly 28 percent in Washington, D.C. (combined sectors). Losses in the population (i.e., number) of Black teachers were even greater, ranging from a low of 15 percent in New York City (combined sectors) to a high of 62 percent in New Orleans (combined sectors).[5] The available evidence suggests that seniority-based layoffs played little or no role in these declines.

- In the nine cities we studied, trends for Hispanic teachers were more positive than those for Black teachers, but still well short of the need. Over the course of the 10 years in our study, the Hispanic shares of the teacher workforces across the selected cities were basically stable or showed modest growth. The one exception was Los Angeles, where the Hispanic share of the teacher population grew markedly in both the district and charter sectors. In contrast to Black teachers, the actual numbers of Hispanic teachers in the cities also grew during these years, with Cleveland being the lone exception. However, given that Hispanics currently represent the fastest-growing share of the American student population, substantial additional growth of the Hispanic teaching force would be required to narrow

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3   The national data are drawn from the Schools and Staffing Survey and the Teacher Follow-Up Survey, both administered by the National Center for Education Statistics in the U.S. Department of Education.

4   The report used data obtained through freedom of information requests for the 10-year period from 2002 to 2012, as well as data that had already been published. Although state and city educational agencies for five of the nine cities were compliant with the law and provided the requested data for at least a portion of the years requested, problems arose with educational agencies for the other four cities. Consequently, there are gaps in the data available for the study, especially for charter schools.

5   We were unable to obtain the data to calculate the Black teacher population loss in Washington, D.C. As Washington, D.C., had the largest loss of the share of Black teachers, it might very well also have the largest decline in the population of Black teachers.

the representation gap with Hispanic students.

- While the analysis of the national data points to the high attrition rates of minority teachers as the main obstacle to improving the diversity of the teaching force, the underrepresentation of Black and Hispanic teachers among new hires also appears to be a serious problem in many of the cities. Approaches to improving teacher diversity in these cities will need to address both minority teacher recruitment and hiring, on the one hand, and minority teacher retention, on the other hand.

- Across our nine cities, teachers of all races and ethnicities tended to teach in schools with high concentrations of students who were low income and minority. As a general rule, Black and Hispanic teachers taught in schools with at least modestly higher concentrations of low income and minority students.

RECOMMENDATIONS

The recommendations growing out of this report are aimed at policymakers at the federal, state and district levels (Section VI).

FEDERAL GOVERNMENT

- As part of its Civil Rights Data Collection, the U.S. Education Department should collect and report data on the race and ethnicity of the teaching force in all public schools, district and charter.

STATE GOVERNMENT

- State educational agencies must ensure the accuracy and integrity of the data they collect from all public schools, district and charter—including data on the race and ethnicity of teachers—and they must fulfill their legal responsibilities to make those data available to the public.

- Governors, state legislatures and state departments of education should review education-related legislation and policy for their impact on teacher diversity, and amend or modify them to promote diversification and avoid the unintended consequence of diminishing diversity.

BOTH FEDERAL AND STATE GOVERNMENT

- To increase the number of highly qualified minority teachers—and particularly Black, Hispanic and American Indian teachers—entering the profession, the U.S. Education Department and the state departments of education should invest in and support high-quality teacher education programs at historically Black colleges and universities (HBCUs), the nation's Hispanic-serving institutions (HSIs), tribal colleges and universities (TCUs) and public colleges and universities serving large numbers of minority students.

- To ensure that novice teachers are well prepared to enter the classroom and receive the mentoring and support they need to be successful, the U.S. Education Department and the state departments of education should establish incentives for close partnerships between colleges of education, on the one hand, and school districts and charter networks, on the other hand. Particular attention needs to be paid to providing adequate mentoring, support and training in culturally responsive practices to novice teachers—of all races and ethnicities—working in the challenging conditions of high-poverty, de facto racially segregated schools.

- To both increase the number of minorities who are well prepared to enter the teaching profession and ensure that novice minority teachers receive the mentoring and support they need to be successful and remain in teaching, the U.S. Education Department and the state departments of education should support the development and expansion of programs with evidence of helping to recruit, mentor and support minority teachers, such as those described in Section V of this report.

- To increase the numbers of Black and Hispanic teachers who are well prepared to enter the profession, the U.S. Education Department and the state departments of education should support "grow your own" teacher preparation programs and career ladders for educational aides and paraprofessionals seeking to become teachers.

LOCAL SCHOOL DISTRICTS AND SCHOOLS

- School districts and schools, working collaboratively with local teacher unions and community, need to develop strategic plans for the diversification of their teacher workforces. These plans should include specific actions that will be taken and programs that will be developed and supported to improve teacher diversity in all schools, with a particular focus on the educational needs of students from disadvantaged minority groups, especially Black and Hispanic youth.

- School districts, charter schools and teacher unions should use contract negotiations as a vehicle for increasing teaching diversity, incorporating programs and features, such as paraprofessional career ladders, that serve to increase teacher diversity.

- Accountability systems for schools and evaluation systems for administrators with authority over teacher recruitment and hiring should include measures of how recruitment and hiring practices have affected teacher diversity. Evaluation systems for district and school leadership should also include measures of teacher retention and attrition and how these trends have affected teacher diversity.

- The institutional arrangements for the recruitment and hiring of new teachers vary across different school districts and charter schools, with varying responsibilities accorded to human resources departments, school principals and school staffs, depending on the district or charter network. Whatever the particulars, systems of accountability for the leadership and staff of school districts and charter networks must include the effect of recruitment and hiring practices on teacher diversity, as appropriate.

- Urban school districts, district schools, charter networks and charter schools should develop close partnerships with colleges of education to ensure that an increased supply of well-qualified Black and Hispanic teachers are prepared to teach in city schools.

- School districts, district schools, charter networks and charter schools should work to develop and support programs for the recruitment and support of new Black and Hispanic teachers, such as described in Section V of this report.

A WORD ON NOMENCLATURE:

Under ordinary circumstances, the terms "African American," "Latino," "Native American," and "people of color" might be used in this document, following what we understand to be the current preference of the preponderance of people in each of these groups. As the reader will see, we have used the terms "Black," "Hispanic," "American Indian," and "minority" in this report, a choice which requires a word of explanation.

In everyday conversation, these two sets of terms are seen as synonymous. But as concepts of social science, they are not. Mixed together in those terms are different systems of classification: races defined by a set of physical features such as skin complexion, ethnic groups defined by a shared cultural heritage, linguistic groups defined by a common language, and sociological groups defined by a social status. These categories overlap to a significant degree, but they are not the same.

We are bedeviled here by the nature of racial categories: they have always been fundamentally arbitrary ways of classifying human beings – as a matter of biological science, there are few differences less important in human beings than our skin complexion – but remain powerful social forces shaping our lives nonetheless. Racial categories emerged at the center of discourses of justification for oppression and exploitation, and will remain powerful so long as that oppression and exploitation continue.

But the fact remains that data on race and ethnicity in the United States is generally collected using the categories employed by the U.S. Census Bureau—White, Black, Hispanic, Asian and Pacific Islander, and American Indian. This was the case in our datasets, right down to the fact that the term "multiracial" was introduced by most cities after the U.S. Census Bureau adopted it. Since these terms and their common alternatives are not synonymous in this context, we use the U.S. Census Bureau terms "Black," "Hispanic," "American Indian" and "minority" throughout this report.

SECTION II:
The Evidence on Teacher Diversity

In a perfect world, all public schools would be integrated by income, race and ethnicity, with perfectly equal educational opportunities available to every American child. There is compelling evidence that this would be beneficial for strengthening our democracy, boosting our economy, increasing social justice and improving general educational outcomes (Coleman, 1966; Schofield, 1995; Jehn, Northcraft & Neale, 1999; Kahlenberg, 2001; Rumberger & Palardy, 2005; Harris, 2006; Kahlenberg, 2007; Condron, 2009; Borman & Dowling, 2010; Mickelson & Bottia, 2010; Ready & Silander, 2011).

But we don't live in a perfect world. In fact, there are data showing that schools are becoming increasingly re-segregated. According to a 2012 report, despite "declining residential segregation for Black families and large-scale movement to the suburbs in most parts of the country, school segregation remains very high for Black students. It is also double segregation by both race and poverty. Nationwide, the typical Black student is now in a school where almost two out of every three classmates (64 percent) are low-income, nearly double the level in schools of the typical white or Asian student (37 percent and 39 percent, respectively)" (Orfield, Kucsera & Siegel-Hawley, 2012). At the same time, "segregation has increased seriously across the country for Hispanic students, who are attending more intensely segregated and impoverished schools than they have for generations" (Ibid.). As a consequence, "fully 15 percent of Black students, and 14 percent of Latino students, attend 'apartheid schools' across the nation, where whites make up 0 to 1 percent of the enrollment" (Ibid.).

It is against this backdrop that we became concerned with anecdotal reports that America's teaching force was becoming less and less diverse, especially in urban districts with the largest number of minority students. We decided to explore.

In Section III, Richard Ingersoll provides a snapshot of national trends. As he concludes, the data show a persistent "racial-ethnic parity gap between the percentage of minority students and the percentage of minority teachers." He also concludes that minority teacher recruitment efforts have been effective, such that "minorities have entered teaching at higher rates than nonminorities over the past two and a half decades," but that minority teachers have also been leaving schools at very high rates. Clearly, recruitment efforts need to be complemented by retention efforts.

To investigate reports that the declines in the numbers of minority teachers in urban areas were particularly acute, we filed freedom of information requests to obtain data from nine cities, ensuring some variation in terms of size, geographic location and charter-sector market share. An overview of these findings and individual city summaries can be found in Section IV. As you will see from the city profiles, our findings present a mixed picture, with some cause for hope, such as the increases of Hispanic teachers in the district and charter schools of Los Angeles, and some for alarm, such as in the sharp, massive declines in Black teachers in Chicago, New Orleans and Washington, D.C. Also of note: In every city we studied, we found that the number of Black teachers was in decline.

All of this begs the question, of course, as to why diversity in the teaching force—or lack thereof—is such a major concern. In a school system that is less and less integrated, why insist that the teaching force should become more so? To answer this question, we summarize some of the research on why, in the words of former Education Secretary Richard Riley, the U.S. teaching force should "look like America."[1]

THE CASE FOR TEACHER DIVERSITY

Obviously, our first priority must be to ensure that every student has the benefit of being taught by skilled, knowledgeable and caring teachers—of whatever race and ethnicity. This is and must remain our top priority. That is, race and ethnicity need not be the top factor in deciding how teachers should be recruited, hired, assigned or retained—but there is ample evidence to support the contention that it should indeed be *a* factor, and an important one at that.

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[1]   Riley, R. (Nov. 1998). "Our Teachers Should Be Excellent, and They Should Look Like America," *Education and Urban Society*, 31: 18-29.

There is research to support at least five separate (though somewhat related) arguments for diversifying the teaching force. Although our review of the evidence for these arguments is by no means exhaustive,[2] short summaries are provided below.

Reducing Teacher Turnover

According to a Schott Foundation report (2009), American Indian, Black and Hispanic students have roughly half of the "opportunity to learn" as White, non-Hispanic students in the country's top-ranking schools—largely owing to the difficulty of finding and retaining highly qualified teachers to serve in schools in high-poverty, high-minority neighborhoods.

Predominantly Black high-poverty schools face not only high rates of teacher attrition and absences, but are also twice as likely to have the most inexperienced teachers (Irvine & Fenwick, 2011). These teachers face challenges in curriculum development, classroom management, student support and teaching approaches (Darling-Hammond & Baratz-Snowden, 2005).

Research indicates that teachers of color, especially Black teachers, are particularly motivated to work with students of color to improve their academic achievement (Kauchak and Burback, 2003; Belcher, 2001; Ingersoll and May, 2011), and thus, may help to lower the high attrition rate of teachers in high-poverty, high-minority schools (Irvine & Fenwick, 2011).

An analysis of data from North Carolina and Michigan revealed that teachers of color were less likely to leave teaching than White teachers, even after controlling for factors such as school size and poverty level (Murnane et al., 1991). Since urban public schools with low-income minority students experience severe teacher shortages, increasing the representation of teachers of color at these schools may help to address the lack of teachers at hard-to-staff schools (Ingersoll & May, 2011).

Improving the Academic Performance of Minority Students

It has long been argued that there is a particular social and emotional benefit to minority children, and especially minority children from high-poverty neighborhoods, from knowing—and being known and recognized by—people who look like themselves who are successful and in positions of authority (more on this later). But there is also a growing body of evidence to suggest that minority students derive academic benefits from having access to demographically similar teachers.

For example, in one important study, Stanford professor Thomas Dee (2004) reanalyzed test score data from Tennessee's Project STAR class size experiment, still one of the largest U.S. studies to employ the random assignment of students and teachers. Dee found that a one-year same-race pairing of students and teachers significantly increased the math and reading test scores of both Black and White students by roughly 3 to 4 percentile points. These effects were even stronger for poor Black students in racially segregated schools (Dee, 2004).

Similarly, another study (Hanushek et al., 2005) found that Black teachers were significantly more successful than White teachers in improving the reading and vocabulary scores of Black students. And yet another (Clewell et al., 2005) found that test score gains in mathematics were significantly higher for Hispanic students taught by Hispanic teachers than for similar students taught by teachers of different ethnic backgrounds, while gains for Black students paired with Black teachers, though weaker, were also positive.

Other studies show that racially and ethnically similar teachers significantly improved the high school graduation rates of Black and Hispanic students, increased the matriculation rate for Hispanic students, reduced Hispanic students' dropout rates, lowered the number of Hispanic students assigned to special education, boosted Hispanic students' placement in classes for the gifted, decreased Hispanic students' rates of suspension and expulsions, and increased Black students' enrollment in advanced math classes (Fraga et al., 1986; Farkas et al., 1990; Meire, 1993; Hess & Leal, 1997; Clewell et al., 2005; Klopfenstein, 2005; Pitts, 2007).

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2   For a more comprehensive review of the research on teacher diversity, see the very helpful article, Villegas & Irvine (2010). "Diversifying the Teaching Force: An Examination of Major Arguments," Urban Review, 42: 175-192.

Providing Minority Students with Role Models and Cultural Connection

Another line of argument focuses on minority students' need for relatable role models and, in like manner, the role of minority teachers in helping school feel like a caring place for minority students. Fundamentally, this is an extension of community, where students feel that they and their home cultures are warmly embraced.

Theresa Perry, Claude Steele and Asa Hilliard (2003), in *Young, Gifted and Black: Promoting High Achievement among African-American Students*, argued that, although much was gained, something was also lost with the advent of integrated school systems, specifically that segregated Black schools of previous generations

> were intentionally organized in opposition to the ideology of Black inferiority. In other words, in addition to being sites of learning, they also instituted practices and expected behaviors and outcomes that not only promoted education—an act of insurgency in its own right—but also were designed to counter the ideology of African Americans' intellectual inferiority and ideologies that saw African Americans as not quite equal and as less than human.

Indeed, there is research that suggests that the performance of Black students, perhaps more so than students of other races and ethnicities, is influenced to a large degree by the support and nurturing provided by teachers (Foster, 1997; Ladson-Billings, 1994).

It has been argued that teachers of color can help fill this gap for minority students by bolstering their confidence and motivation, and alleviating their sense of marginalization (Cole, 1986; Graham, 1987; King, 1993). Further, since "teachers are often the only college-educated people they know," poor minority students can derive great benefit from having access to role models who (1) understand their home cultures, (2) understand the education system and have succeeded in it, (3) are interested in the students' educational progress, and (4) will challenge students academically. That is, culturally similar teachers may take more interest in mentoring minority students and have more credibility with those students (Klopfenstein, 2005).

Relatedly, Gloria Ladson-Billings (1994), Pedro Noguera (2008) and other scholars have emphasized that teachers who have knowledge of children's out-of-school lives and cultures are less likely to confuse cultural difference for cultural or intellectual disadvantage. In one example, Lisa Delpit (1986) describes a Black teacher's frustration with a process approach to writing being advocated by White colleagues that, in her opinion, gave insufficient focus to challenging content and skills:

> "These people keep pushing this fluency thing," said Cathy. "What do they think? Our children have no fluency? If they think that, they ought to read some of the rap songs my students write all the time. They might not be writing their school assignments, but they sure are writing. Our kids *are* fluent. What they need are the skills that will get them into college. I've got a kid right now, brilliant. But he can't get a score on the SAT that will even get him considered by any halfway decent college. He needs *skills*, not *fluency*."

High Expectations

On a related topic, several researchers have written about the importance of teachers holding high expectations for students, and the role that teacher diversity can play in ensuring that these high expectations are held and expressed for all students. Although most of this research has focused on the expectations gap in relation to Black students, there have been similar findings in regard to Hispanic students, American Indian students and others.

For example, a 2009 report by the National Women's Law Center and the Mexican American Legal Defense and Educational Fund notes that female Hispanic students may face lower expectations related to dual stereotypes of gender and ethnicity: "Some Latinas still find that their teachers and classmates treat them differently—in both subtle and blatant ways—or have different expectations for them because they are Latina. This treatment makes them feel unwelcome at school and can affect their academic performance and graduation rates."

Some of the literature related to educational opportunities for Black students has focused on the ways in which a shared racial and cultural background can facilitate the development of a trusting, "warm demander" relationship between teachers and students, in which high expectations are seen as a natural byproduct of mutual respect (Ladson-Billings, 2004; Ware, 2006; Bondy & Ross, 2008; Ford & Sassi, 2014).

Another line of analysis has used quantitative methods to estimate the gap in expectations that Black and White

teachers hold in regard to the academic potential of Black children and, in some cases, the degree to which this expectations gap has served to impede students' academic performance (Jussim, Eccles & Madon, 1996; Ferguson, 2003; Oates, 2003). In one fascinating such study, David Figlio (2005) investigated whether teachers may unconsciously hold different expectations of students based on the racial or ethnic signaling expressed by their names. By examining a dataset that included information on 55,046 children in 24,298 families with two or more children, he was able to compare how observationally equivalent siblings with similar test scores but different types of names are treated differently by teachers. He found that "teachers tend to treat children differently depending on their names, and that these same patterns apparently translate into large differences in test scores." He also found that Black teachers were less likely to hold low expectations for students based on the ethnicity of children's names.

In addition, two interesting studies used large national datasets to quantify the extent to which teacher-student demographic mismatches might adversely affect teacher expectations. In the first (Dee, 2005), the researcher found that both Black and Hispanic students were more likely to be viewed unfavorably when paired with a teacher that was not of their own race or ethnicity. In the second, which is a very recent study (Gershenson, Holt & Papageorgeor, 2015), researchers used a student fixed-effects strategy to analyze data from the Educational Longitudinal Study of 2002, in which expectations from two teachers per student were reported. They too found that non-Black teachers of Black students had significantly lower expectations than did their Black teachers:

> For example, relative to teachers of the same race and sex as the student, other-race teachers were 12 percentage points less likely to expect black students to complete a four-year college degree. Such effects were even larger for other-race and other-sex teachers, for black male students and for math teachers. In addition to being statistically significant, these effects are arguably practically significant as well, as they constitute more than half of the black-white gap in teacher expectations.

Reducing Implicit Bias and Providing Role Models for Students of All Races

Last, but not least, there is the argument that American students as a whole benefit from exposure to people of different backgrounds and beliefs, especially in regard to the anti-bias effects that such familiarity can bring.

Since the mid-1980s, researchers have argued that the lack of teacher diversity serves to undermine democratic amity by reinforcing stereotypes and perpetuating existing social inequalities (see, for example, Carnegie Forum on Education and the Economy, 1986). A growing body of recent research serves to underscore this point.

A case in point is research on implicit bias, which is unconscious judgments and opinions that arise through a system of everyday mental processes that are so quick as to be imperceptible. But the fact that they are automatic and outside of conscious control can make them very hard to counter and correct for. Being influenced by cultural stereotypes is one of the more common forms of implicit bias.

Stereotypes are cognitive associations between a group and a trait (or set of traits), such as women and nurturing, men and leadership skills, Black males and aggression, etc. After frequent (and sometimes subtle) exposures from our social environments, these mental associations form automatically, even in the absence of conscious antipathies toward groups (Gaertner & Dovidio, 1986; Devine, 1989; Bargh, 1999; Dovidio & Gaertner, 2004; Greenwald & Krieger, 2006; Jost et al., 2009).

In 2009, researchers from Harvard and Yale (Paluck & Green, 2009) conducted a research review to determine what worked to reduce such prejudiced responses. They concluded that, although many popular programs remained unproven, experiments with cross-race contact and cooperation had yielded promising results. Similarly, a meta-analysis of more than 500 studies from the 1940s through 2000, including responses from more than 250,000 participants in 38 countries, showed that greater contact between groups was predictive of lower intergroup prejudice (Pettigrew & Tropp, 2006; 2011).

In 2009, another group of researchers (Plant et al., 2009) explored the "Obama Effect," examining what impact Barack Obama's presidential campaign, and the resulting high levels of counter-stereotypic exposure to a Black authority figure, might have on participants of other races. They found "dramatically decreased levels of implicit anti-Black prejudice and stereotyping." And, in 2012, a study reported positive outcomes for a "multi-faceted prejudice habit-breaking intervention to produce long-term reductions in implicit race bias." Among the strategies employed by the researchers was "contact with counter-stereotypic others," which provided grist for

counter-stereotypic imaging and stereotype replacement (Devine et al., 2012).

Another study of particular relevance to a discussion on the effect of school staff diversity is from the field of cognitive neuroscience, which suggests that such cross-racial exposure has a more powerful effect on brain processes if it occurs in childhood. In this 2014 paper, researchers (Cloutier, Li & Correll, 2014) used brain scans to examine participants' activity in the amygdala (a part of the brain associated with the fight-or-flight response that is thought to help process perceptual information related to external threats) in response to unfamiliar, out-of-group faces, particularly White responses to Black faces. They found "strong support" to the idea that high levels of contact with minority groups during childhood may serve to attenuate unconscious biases in non-minority adults.

CONCLUSION

Those who follow the nation's education policy debates know that, for the past several years, "teacher quality" has become the dominant paradigm for improving schools. What constitutes "good" teachers, how they are identified, whether and how their test score effects can be quantified, whether they are born or made, and how they can be made better all have been subjects of intense debate.

The implications of the studies we review here—and the data described later in this report—are that issues of teacher quality and educational opportunity cannot adequately be considered irrespective of student and teacher demographics. There is reason to believe that, throughout their school careers, every student in the nation would benefit from access to teachers and role models who not only look like them but reflect the diverse society in which they must learn to live, work and prosper.

As Richard Riley observed nearly two decades ago, there is no evading the fact that high-quality teaching and high-quality schools will be much harder to achieve in the absence of a teacher force that "looks like America."

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What Do the National Data Tell Us About Minority Teacher Shortages?

By Richard Ingersoll, University of Pennsylvania

INTRODUCTION

For the past several decades, shortages of minority teachers have been a big issue for the nation's schools. Policymakers at all levels, including recent presidents, have agreed that our elementary and secondary teaching force "should look like America." But conventional wisdom is that as the nation's population and students have grown more racially and ethnically diverse, the teaching force has done the opposite. The result, we are told, is that minority students in the nation's schools increasingly lack minority adult role models, don't have sufficient contact with teachers who understand their racial and cultural backgrounds, and often lack qualified teachers of any background, because nonminority teachers eschew schools with large percentages of minorities. The minority teacher shortage in turn, we are told, is a major reason for the minority achievement gap and, ultimately, unequal occupational and life outcomes for disadvantaged students. In short, the minority teacher shortage is considered a major civil rights issue (for reviews, see Quiocho & Rios, 2000; Torres et al., 2004; Villegas & Lucas, 2004; Zumwalt & Craig, 2005).

The main source of minority teacher shortages, conventional wisdom holds, is a problem with the teacher supply pipeline. In this view, too few minority students enter and complete college, and those who do have an increasing number of career and employment options aside from teaching. Moreover, when minority candidates do seek to enter teaching, this view holds, they encounter barriers—in particular, teaching entry tests, on which minority candidates historically have tended to have lower pass rates. The result is the minority teacher shortage.

The prescription, understandably enough, has been to try to recruit more minority candidates into teaching. In recent decades, numerous government and nongovernment organizations have launched a variety of minority teacher recruitment programs and initiatives, including future educator programs in high schools, partnerships between community colleges and four-year teacher education programs, career ladders for paraprofessionals in schools, and alternative teacher certification programs (see, e.g., Hirsch, Koppich & Knapp, 2001; Feistritzer, 1997; Liu et al., 2008; Rice, Roellke, Sparks & Kolbe, 2008). Support for these efforts has been substantial. For instance, beginning in the late 1980s, the Ford Foundation, along with the DeWitt Wallace Reader's Digest Fund, committed more than $60 million to minority teacher recruitment and preparation programs. Many of these initiatives have been designed to bring minority teachers into schools serving predominantly minority student populations, often in low-income, urban school districts. Some of these initiatives have been designed specifically to recruit minority men, as they are often considered to be in the shortest supply. Today, in more than half of the states, minority teacher recruitment policies or programs of some sort are in place. Despite these ongoing efforts, however, many commentators see little success, claiming that, if anything, the student-teacher diversity gap has widened (e.g., Villegas, Strom and Lucas, 2012). This raises important questions: Has the teaching force grown more diverse or less so? And if diversity has not increased, why haven't these efforts been successful? This section seeks to address these questions.

This section draws from and updates an earlier study, undertaken with Henry May, that analyzed two decades of national data from the late 1980s to 2009 on minority teacher recruitment, retention and shortages (for reports of this earlier study, see Ingersoll & May, 2011a; Ingersoll & May, 2011b).

THE STUDY

This section summarizes a study I recently completed that used the best national data available in an attempt to empirically ground the debate on the recruitment, employment and retention of minority teachers.

Our study sought to address several questions:

- **The Number of Minority Teachers:** Has the number of minority teachers been going up or down in recent decades? What changes have there been, if any, in the number of minority students and teachers, and how does this compare with nonminority students and teachers?

- **The Employment of Minority Teachers:** Where are minority teachers employed? Are minority teachers more likely than nonminority teachers to be employed in schools serving high-poverty, high-minority, urban student populations?

- **Minority Teacher Turnover:** How does minority teacher retention compare with that of nonminority teachers, and has it been going up or down?

- **What Can Be Done to Increase the Number of Minority Teachers?** What are the implications of the data for the prospects of increasing the number of minority teachers?

Note that this section focuses on changes in the employment and retention of minority teachers, and does not focus on the important and contentious question of whether minority teachers are better at teaching minority students.

The data we analyzed for this study are from the nationally representative Schools and Staffing Survey (SASS) and its longitudinal supplement, the Teacher Follow-Up Survey (TFS), both administered by the National Center for Education Statistics in the U.S. Department of Education. SASS is the largest and most comprehensive data source available on teachers. There have been seven SASS cycles to date: 1987-88, 1990-91, 1993-94, 1999-00, 2003-04, 2007-08 and 2011-12. Twelve months after the administration of SASS, the same schools are contacted again, and all those in the original teacher sample who had departed from their schools are given a second questionnaire to obtain information on their departures. The TFS comprises this latter group, along with a representative sample of those who stayed in their teaching jobs (for information on SASS and TFS, see NCES, 2005). Our analyses use data from all seven cycles of SASS and TFS, covering the 25-year period from 1987 to 2013.

Throughout this study, the definitions of *minority* teachers and *nonminority* teachers are based on Census Bureau classifications of race/ethnicity. *Nonminority* refers to those identified as White, non-Hispanic. *Minority* includes those identified as Black/African-American, Hispanic, Native Hawaiian/Pacific Islander or Asian, and American Indian/Native American/Alaska Native, and those of multiple races. *Hispanic* refers to ethnicity and includes those of all races; it is important to recognize that more than half of those identifying as Hispanic are White. Hence, the term *person of color* is not synonymous with *minority*; hence, for clarity, we will not use the former term.

THE RESULTS

The Number of Minority Teachers

The data clearly show that there continues to be a persistent racial-ethnic parity gap between the percentage of minority students and the percentage of minority teachers in the U.S. school system. For instance, in the 2011-12 school year, 37 percent of the nation's population was minority and 44.1 percent of all elementary and secondary students were minority, but only 17.3 percent of all elementary and secondary teachers were minority (see Table NAT-1). This student-teacher gap also exists for each of the major minority subgroups, as illustrated in Table NAT-2. For example, in 2011-12, while 21 percent of elementary and secondary students in the United States were Hispanic, only 7.5 percent of teachers were Hispanic.

TABLE NAT-1: TRENDS IN THE NATION'S POPULATION, K-12 STUDENT ENROLLMENT AND THE K-12 TEACHING FORCE, BY RACE AND ETHNICITY, 1987-2012

	1987-88 School Year	1990-91 School Year	1993-94 School Year	1999-00 School Year	2003-04 School Year	2007-08 School Year	2011-12 School Year	% Increase, 1987-88 to 2011-12
Percent Minority Population of U.S.	23.1	24.3	25.6	28.1	32.1	34.4	37.0	
Total Student Enrollment	45,220,953	44,777,577	46,592,207	50,629,075	52,375,110	53,644,872	53,988,330	19
Number White, non-Hispanic Students	31,641,098	31,213,142	31,895,394	32,700,441	32,419,640	31,864,127	30,164,827	-5
Number Minority Students	12,335,372	13,564,435	14,696,813	17,928,634	19,955,470	21,780,745	23,825,612	93
Percent Minority Students	27.3	30.3	31.5	35.4	38.1	40.6	44.1	
Total Teaching Force	2,630,335	2,915,774	2,939,659	3,451,316	3,717,998	3,894,065	3,850,058	46
Number White, non-Hispanic Teachers	2,303,094	2,542,720	2,564,416	2,933,591	3,113,249	3,252,234	3,183,837	38
Number Minority Teachers	327,241	373,054	375,243	517,725	604,749	641,830	666,221	104
Percent Minority Teachers	12.4	12.8	12.8	15.0	16.3	16.5	17.3	

TABLE NAT-2: PERCENTAGE OF STUDENTS AND TEACHERS, BY RACE AND ETHNICITY, 2011-2012

	White, non-Hispanic	Minority	Black	Hispanic	Asian	American Indian	Multiple Races
Students	55.9	44.1	14.4	21.1	5.1	1.2	2.3
Teachers	82.7	17.3	6.4	7.5	1.9	0.4	1.0

But the data also show that this student-teacher parity gap has persisted in recent years largely because the number of nonminority students has decreased while the number of minority students has increased (Table NAT-1). The gap is not due to a failure to recruit minority teachers.

Since the late 1980s, the number of elementary and secondary teachers has dramatically increased. This is especially true for minority teachers, whose numbers have more than doubled from about 325,000 to 666,000. Even as the size of the teaching force has grown, the percentage of minority teachers has increased steadily—from 12 to 17 percent (bottom row of Table NAT-1). Growth in the number of minority teachers outpaced growth in the number of minority students and was more than twice the growth rate of nonminority teachers during this 24-year period (see Figure NAT-1). So, while there is still not parity between the proportions of minority students and minority teachers in schools, the U.S. teaching force has grown more diverse since the late 1980s.

Interestingly, the overall growth pattern from 1987 to 2012 was also true for male minority teachers. Teaching has long been a predominantly female occupation, and in recent decades, it has become increasingly so (Ingersoll, Merrill & Stuckey, 2014). But this varies by race and ethnicity. Over the two and a half decade period from 1987 to 2012, the number of nonminority male teachers increased by only 12 percent, but the number of minority male teachers increased by 109 percent. In 2011-12, males represented about 24 percent of all nonminority teachers and about 25 percent of all minority teachers.

However, the overall growth from 1987 to 2012 in the number of minority teachers also greatly varied across different minority subgroups and across different time periods. This is shown in Figures NAT-2 and NAT-3, which disaggregate the data in Figure NAT-1, by both group and time.

FIGURE NAT-2: PERCENT CHANGE IN STUDENTS AND TEACHERS, BY RACE AND ETHNICITY, 1987-88 TO 2007-08
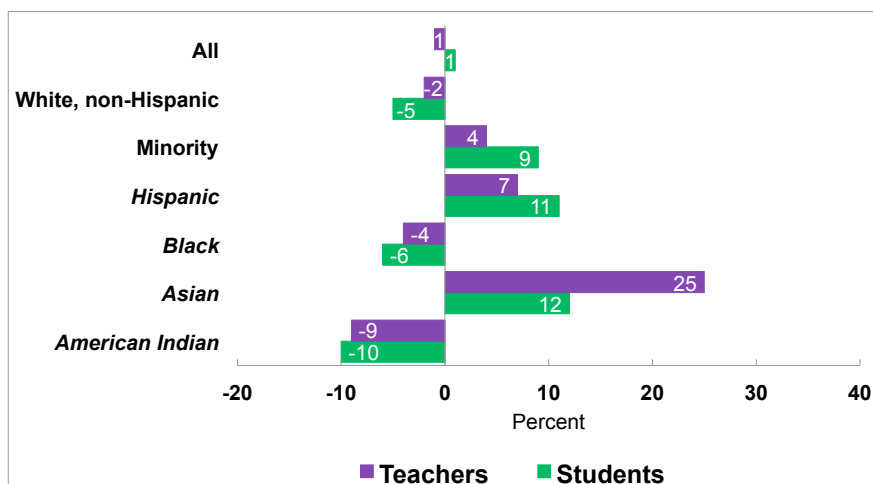
During the period from 1987 to 2008, the overall number of both teachers and students increased. Moreover, in all but one case, growth in minority teachers outpaced growth in minority students (see Figure NAT-2). While the number of nonminority teachers increased by 41 percent, the number of Hispanic teachers increased by 245 percent and the number of Asian teachers increased by 148 percent. Black teachers also grew in number, but at a far slower rate. The large exception to this growth was American Indian teachers, who declined in number by 30 percent. American Indians comprise only 1 percent of students and less than half a percent of the teaching force.

This pattern changed after 2008, when the economic downturn and recession began. Figure NAT-3 shows trends for the period from 2008 to 2012. During that period, there was a decline in the number of nonminorities, Blacks and American Indians, for both teachers and students. In contrast, the number of Hispanic and Asian teachers and students continued to increase.

The Employment of Minority Teachers

While there has been a dramatic increase in minority teachers, this growth has not been equally distributed across different types of schools. In 2011-12, 92 percent of minority teachers were employed in public schools (Table NAT-3). Moreover, minority teachers were overwhelmingly employed in public schools serving high-poverty, high-minority, urban communities. Nearly two-thirds of minority teachers worked in schools serving predominantly minority students. A similar proportion was employed in high-poverty schools. Minority teachers were two to three times more likely than nonminority teachers to work in such hard-to-staff schools. In contrast, only 3 percent of minority teachers were in low-minority schools (i.e., those in which less than a 10th of the students are minority).

School Type	White, non-Hispanic	Minority	Black	Hispanic	Asian	American Indian	Multiple Races
Public	87.1	91.9	93.2	91.5	87.5	97.6	91.5
Urban	25	45	50	44	49	19	33
Suburban	33	29	27	32	28	20	38
High Poverty	31	62	68	63	52	59	42
Low Poverty	23	11	8	11	18	7	21
High Minority	21	64	67	67	59	43	41
Low Minority	21	3	1	3	5	5	8
Private	12.9	8.1	6.8	8.5	12.5	2.4	8.5

Note: High-poverty schools are those in which 60% or more of the students are eligible for the federal free or reduced-price lunch program for students from families below poverty level. Low-poverty schools are those in which less than 20% of the students are eligible for the federal free or reduced-price lunch program. High-minority schools are those in which 75% or more of the students are minority. Low-minority schools are those in which less than 10% of the students are minority.

Because minority teachers represented only 17.3 percent of the teaching force in 2011-12, in the types of schools where minority teachers were disproportionately employed, the teaching staff overall was nevertheless predominantly White, non-Hispanic. Figure NAT-4 illustrates this continuing lack of demographic parity. For instance, in high-minority public schools (i.e., those with 75 percent or more minority students), only 40 percent of teachers were minority. Likewise, in high-poverty public schools, only 31 percent of teachers were minority.

FIGURE NAT-4: OF DIFFERENT TYPES OF PUBLIC SCHOOLS, RACE AND ETHNICITY OF THEIR TEACHING STAFFS, 2011-2012
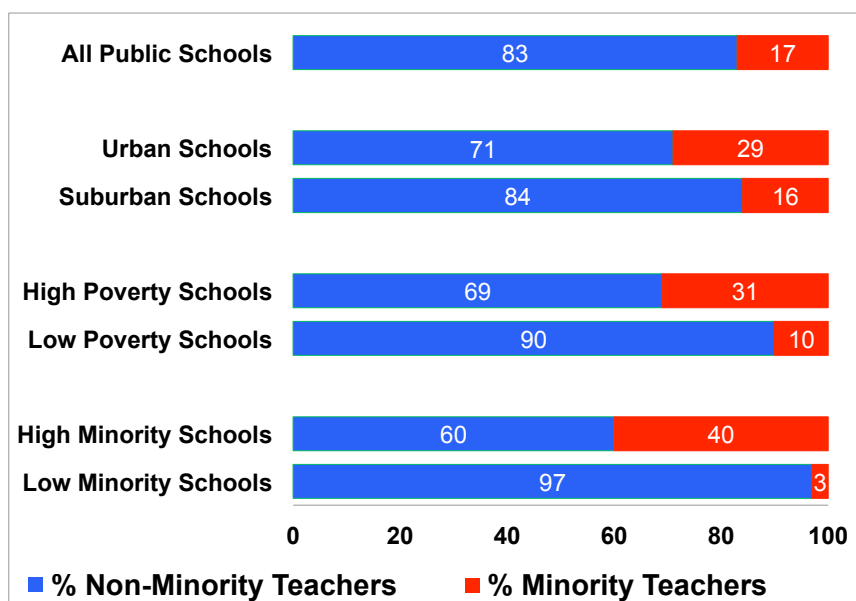
In sum, while a large student-teacher racial and ethnic parity gap persists in schools, the data show that efforts over recent decades to recruit more minority teachers and place them in schools serving disadvantaged and minority students have been very successful. This has been somewhat of an unheralded victory. While commentators and researchers have tended to discuss the minority teacher shortage in dire and pessimistic terms, the data suggest that such efforts and expenditures are working.

Minority Teacher Turnover

While minorities entered teaching at higher rates than nonminorities over the two and a half decades from 1987 to 2012, minority teachers also left schools at higher rates. Overall, the data show that minority teachers' careers have been less stable than those of nonminority teachers, and have included more job transitioning. In recent years, minority teachers were more likely to depart their schools, either to migrate to another school or to leave teaching altogether (see Figure NAT-5). This was especially true for male minority teachers.

FIGURE NAT-5: PERCENT OF ANNUAL PUBLIC SCHOOL TEACHER TURNOVER, BY RACE AND ETHNICITY OF TEACHERS, BY YEAR
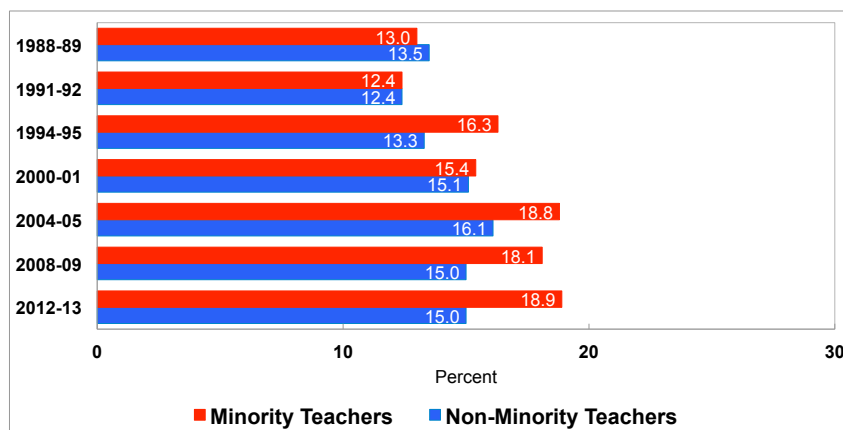
Some turnover and departures of teachers is normal, inevitable and even beneficial. For individuals, departures that lead to better jobs, in teaching or not, are a source of upward mobility. For schools, departures of low-performing employees can enhance school performance. For the educational system as a whole, some teacher career changes—such as moving from one school to another, or leaving classroom teaching for other education-related jobs—do not represent a net loss of human capital.

However, from the viewpoint of those managing schools and those seeking to employ more minority teachers in school classrooms, none of these types of departures are cost-free. All have the same effect: They reduce the number of minority teachers in the organization. One consequence of such turnover, our analysis reveals, is that it undermines efforts to address the minority teacher shortage. For instance, at the beginning of the 2003-04 school year, about 47,600 minority teachers entered teaching; however, by the following school year, 20 percent more—about 56,000—had left teaching. These data convey an image of a revolving door: too many going in one door and out another.

What are the reasons for the high rates of minority teacher turnover? Contrary to conventional wisdom, retirement is not an especially prominent factor (see Figure NAT-6), as it was reported by only 17 percent of those who departed. At 25 percent, school staffing cutbacks due to layoffs, terminations, school closings and reorganizations account for a larger proportion of turnover than does retirement. These staffing actions more often result in teachers migrating to other teaching jobs than leaving the teaching occupation altogether.

FIGURE NAT-6: PERCENT OF MINORITY PUBLIC SCHOOL TEACHERS REPORTING GENERAL TYPES OF REASONS FOR THEIR TURNOVER, 2012-2013

A chart showing percentages for reasons of turnover:
- Retire: 17
- School Staffing Action: 25
- Family or Personal: 46
- To Pursue Other Job: 30
- Dissatisfaction: 50

(x-axis: Percent, 0 to 100)
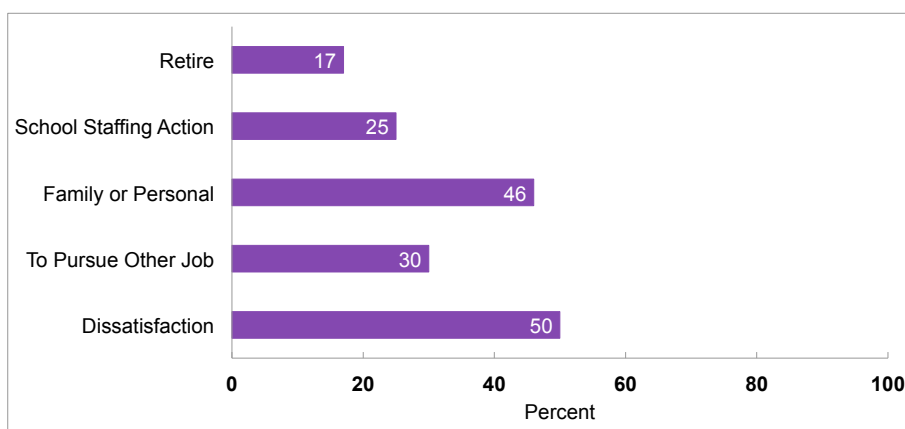
A third category of minority teacher turnover—personal reasons—includes departures for pregnancy, child rearing, health problems and family moves. These account for more turnover than either retirement or staffing actions, and they are probably common to all occupations and all types of organizations. The two final sets of reasons are directly related to the working conditions of teaching. More than half of all those who depart report as a reason either job dissatisfaction or the desire to pursue a better job, another career or better career opportunities in or out of education. Individually, each of these categories accounts for more turnover than does retirement; together, they are the most prominent source of turnover.

Of those minority teachers who depart because of job dissatisfaction, most link their turnover to the way their school is administered, to how student assessments and school accountability affected teaching, to student discipline problems, and to a lack of input into decisions and a lack of classroom autonomy over their teaching (see Figure NAT-7). The data also show that nonminority teachers report similar reasons behind their turnover, and, in general, similar kinds of dissatisfactions underlie both teacher migration and teacher attrition.

FIGURE NAT-7: OF THOSE MINORITY PUBLIC SCHOOL TEACHERS REPORTING DISSATISFACTION, PERCENT REPORTING PARTICULAR REASONS FOR THEIR TURNOVER, 2012-2013

A chart showing percentages of particular reasons:
- Dissatisfied with Administration: 81
- Dissatisfied with Accountability/Testing: 65
- Student Discipline Problems: 61
- Lack of Influence & Autonomy: 57
- Poor Workplace Conditions: 56
- Classroom Intrusions: 46
- Poor Salary/Benefits: 39
- Dissatisfied with Teaching Assignment: 31
- Class Sizes too Large: 23

(x-axis: Percent, 0 to 100)
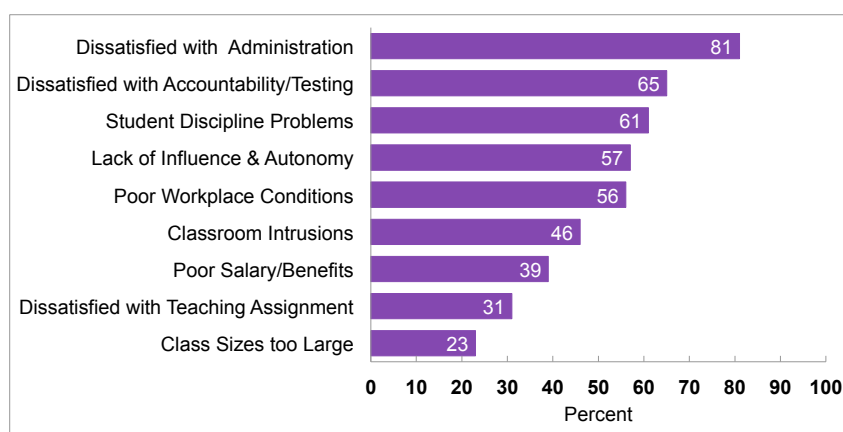
In sum, the data indicate that minority teachers depart their jobs for a variety of reasons. Retirement accounts for a relatively small number of total departures. Some departures are due to school staffing actions, a large proportion of departures is for personal reasons, and another large proportion is for job dissatisfaction or to seek better jobs or other career opportunities. These findings are important because of their policy implications. Unlike explanations that focus on external demographic trends, these findings suggest there is a role for the internal organization and management of schools.

This brings us to a critical question: Why do minority teachers depart schools at higher rates than do nonminority teachers? Strikingly, while the demographic characteristics of schools appear to be highly important to minority teachers' initial employment decisions, this doesn't appear to be the case for their later decisions about whether to depart. Using advanced statistical analyses (Ingersoll & May, 2011a), we found that none of the following was strongly or consistently related to the likelihood of minority teachers staying or departing: student poverty levels, proportion of minority students or teachers, or urban or suburban location. According to a companion study, this also appears to be true when analyzing only the data for Black teachers (Connor, 2011).

What *does* matter is working conditions. While students' race and ethnicity, poverty levels and school urbanicity are not factors in and of themselves, the same hard-to-staff, high-poverty urban schools that are more likely to employ minority teachers are also more likely to have less-desirable working conditions. And these less-desirable conditions, our data suggest, account for the higher rates of minority teacher turnover (see Ingersoll & May, 2011a). In other words, the data indicate that minority teachers are employed at higher rates in schools serving disadvantaged students, and then depart at higher rates because these same schools tend to be less desirable as workplaces. The tragedy is that the success of minority teacher recruitment efforts has been undermined.

Even more striking was what we found when we looked at which conditions were most correlated with minority teachers' departures. Salary levels, the provision of useful professional development and the availability of classroom resources all had some impact on whether these teachers were likely to leave. However, the strongest factors by far for minority teachers were the level of collective faculty decision-making influence in the school and the degree of individual instructional autonomy held by teachers in their classrooms. Influence and autonomy, of course, are hallmarks of respected professions. Schools that provided teachers with more classroom discretion and autonomy, as well as schools with higher levels of faculty input into school decision making, had significantly lower levels of minority teacher turnover.

What Can Be Done to Increase the Number of Minority Teachers?

In supply and demand theory, any imbalance between labor demand and supply can be referred to as a shortage, in the sense that too few individuals are able and willing to offer their services under given wages and conditions. From this perspective, the problems encountered by many schools in retaining minority teachers can technically be referred to as a shortage. However, in the context of minority teachers and schools, the term *shortage* is typically given a narrower connotation—an insufficient production and recruitment of new minority teaching candidates in the face of increasing minority student enrollments. These differences in terminology and diagnosis have crucial implications for prescription and policy.

Increasing production and recruitment of new teachers has long been the dominant strategy for diversifying the teaching force and addressing the minority teacher shortage. And, nothing in our research suggests that bringing new, qualified minority candidates into teaching is not worthwhile. Indeed, our data show that this approach has had remarkable success. In the two and a half decades since the late 1980s, the minority teaching force has increased at more than two and a half times the rate of the nonminority teaching force.

But recruitment alone has not solved the problem of minority teacher shortages or the problem of filling positions in hard-to-staff schools. The data indicate that teacher recruitment strategies alone do not directly address a major source of minority teacher staffing problems—turnover. This is especially true for minority teacher recruitment efforts aimed at male teachers, who have especially high turnover. Indeed, the dramatic growth in the number of minority teachers is all the more remarkable because it has occurred in spite of the high turnover rate among minority teachers.

Improving the retention of minority teachers recruited into teaching, by addressing the factors that drive them out, could prevent the loss of recruitment resources invested and also lessen the need for more recruitment initiatives. These data, and the examples in other sections, suggest the importance of *jointly* developing teacher recruitment *and* teacher retention initiatives. In plain terms, it makes no sense to put substantial effort into recruiting minority candidates to teach in schools serving disadvantaged students, if large numbers of those same teachers then leave those schools in a few years.

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About the City Profiles

In this section of the report, we examine the state of racial and ethnic diversity in the teaching forces of the public schools systems (both district and charter) of nine American cities—Boston, Chicago, Cleveland, Los Angeles, New Orleans, New York, Philadelphia, San Francisco, and Washington, DC.

This investigation was undertaken in response to anecdotal reports that the numbers of minority teachers were in decline in urban districts across the country. To help determine the veracity of this impression, we endeavored to choose cities for this report that included districts of a range of sizes located in a variety of geographic regions. We then filed Freedom of Information Act requests for each city, asking for data from 2002 through 2012 for both district schools and charter schools. (See Data Appendix for more information on the data acquisition process.)

Each city's profile begins with a snapshot (Figure 1) of the current state of racial and ethnic diversity in its public schools. Using the most-recent annual data in our study, this snapshot provides a picture of what an observer would have found in the teaching force and student body of the city's schools at one moment in time. But the snapshot is only a starting point. A full understanding of what is happening with racial and ethnic diversity in the city's schools also requires an analysis of the racial and ethnic distributions among teachers and students over time. The profile turns, therefore, to the investigation of longitudinal trends.[1]

Although Figure 1 and the final data tables that follow each profile include all information on all Census-identified racial and ethnic demographic groups, most longitudinal graphs only describe trends pertaining to demographic groups that the Census identifies as comprising at least 10 percent of the general U.S. population: White-non Hispanic (62 percent), Hispanic (17 percent), and Black (13 percent). Any groups that comprised at least 10 percent of the population of students or teachers in any city were also included for that city, adding trend lines on Asians to the Los Angeles, New York City, and San Francisco profiles.[2]

Each profile provides two different lenses for viewing trends in teacher diversity. First, the shares of the teaching force held by the major racial and ethnic groups were mapped for the years where there were data (Figure 2). Second, population changes in the numbers of teachers within each major racial and ethnic group were presented (Figure 3). By examining these proportional and population changes over time, the reader can gauge whether the district- and charter-school teaching forces in that city have been becoming more diverse, less diverse, or have remained relatively unchanged.

In the next section, each profile looks at the relationship between the racial and ethnic distribution among teachers and the racial and ethnic distribution among students, in both district schools and charter schools. Here we focus on "representation gaps" for minority students (Figure 4).[3] The gender breakdown among minority teachers is also presented (Figure 5), which is of particular concern, given arguments about the need for role models for male minority students.[4]

The profiles next move to indicators of the diversification effect of each city's recruitment and retention policies; they look at the demographics of those who were hired and those who left the teaching force in district and charter schools during this time period. In general, a teaching force is shaped by a combination of "pull" and "push" dynamics: on the pull side of the equation, new staff are added through recruitment and hiring; on the push, the existing staff either stays or leaves through resignations, dismissals, and retirements. To measure the effect of new-teacher hires on teacher diversity in a city's district and charter schools, the profile compares the proportions of different racial and ethnic groups in new hires to their proportions in the existing teaching staff (Figure 6). To gauge the effects of rates of teacher "leavers" on teacher diversity, the profile employs two dif-

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1   It should be noted that, despite the uniformity of our Freedom of Information Act requests, the years of data we were able to obtain varied substantially from city to city.

2   Overview of Race and Hispanic Origin: 2010, US Census Bureau, http://www.census.gov/prod/cen2010/briefs/c2010br-02.pdf.

3   Data for all racial and ethnic groups of teachers and students are available in the master tables for each city profile.

4   For a discussion on this, see Section II, 'The Evidence on Teacher Diversity," in this report.

ferent prisms. First, it compares the rates of teacher leavers over time among different racial and ethnic groups (Figure 7). Second, it calculates the cumulative leaver rate of new teachers among different racial and ethnic groups (Figure 8), a particularly important measure given the rates of attrition among novice teachers.

Finally, each profile looks to see if there are meaningful demographic differences in the district and charter schools in which the various groups of teachers work (Figure 9). Using students' eligibility for free and reduced-price lunch (FRL) as a rough proxy for low income, it compares the average rate of FRL in the schools where teachers of different racial and ethnic groups work. It also compares the average concentration of minority students (in most cases, Black and Hispanic) in the schools where teachers of different racial and ethnic groups work.

How to read the profiles

To fully understand and interpret the data presented in the profiles, readers may also wish to review the details presented below.

The size and scope of our data collection meant that we had to make choices as to which measures to present on the following pages. Our limited selection of variables, as well as inconsistency in what was available across cities and sectors, required us to focus almost entirely on descriptive analysis. *Our results are appropriate for describing teacher diversity in our cities, but not explaining it.* We do, however, hope that what we have produced can serve as a factual baseline, forming the basis for further research and providing elected officials and policymakers enough information to begin the process of assessing current policies.

We chose a set of nine figures (eight graphs and one table) that we feel are both accessible and also provide an idea of the situation in each city, and how it has changed over the years for which we have data (in most cases 2002 to 2012). In order to avoid repeating all of the descriptions and cautions in each city profile, the table below provides a brief overview of each figure, what it expresses, and some quick notes and warnings about the data and how to interpret them.

Virtually all of the data presented in the figures, as well as estimates for individual years (rather than pooled across years) and estimates for the fully disaggregate set of races/ethnicities, are either directly available in or can be derived from the city/sector data tables. Other information about our data (including details on the race/ethnicity categories employed in each sector, the number of "non-valid" observations, data sources, and other relevant details) is in the Data Appendix.

Figure	Title	Description	Notes and cautions
Figure 1	SNAPSHOT OF STUDENT AND TEACHER RACE AND ETHNICITY, [YEAR]	This figure presents the race and ethnicity distribution of teachers and students, citywide (district and charter schools together), in the most-recent year for which we have data. This provides a snapshot of the situation.	■ The teacher percentages, like most of the teacher data presented in the profiles, do not reflect observations with missing or un-identifiable values (e.g., "other") on the race and ethnicity variable. Data on the number of "non-valid" observations are available in the city/sector data tables. ■ The race/ethnicity categories employed for students can vary slightly within and between cities.
Figure 2	TEACHER RACE AND ETHNICITY DISTRIBUTION, BY SECTOR, [YEARS]	This figure presents the race and ethnicity distribution for teachers over time, for both district and charter schools (when available). This permits examination of changes in the share of teachers identifying as a given race or ethnicity over the years in our data.	■ In most city profiles, this figure includes only White, Black, and Hispanic teachers. For Los Angeles, New York City, and San Francisco, it also includes Asians. For trends among other races and ethnicities, see the city/sector data tables. ■ Percentages do not include teachers with missing or unidentifiable values (e.g., "oth-er") on the race and ethnicity variable. ■ In cities and sectors in which a "multiracial" category is available, or becomes available in the middle of our dataset's years, we have noted it in the profiles.
Figure 3	TEACHER POPULATION CHANGES, BY RACE AND ETHNICITY [YEARS]	The percentage changes in this figure represent the citywide change in the number of teachers, by race and ethnicity, between the first and last year for which we have district- and/or charter-sector data. This indicates whether the size of the population of teachers identifying as a given race and ethnicity increased or de-creased over the period of time for which we have data.	■ In four cities (Philadelphia, Chicago, Boston, and New York City), the population size in the base year does not include char-ter school teachers, whereas charters are included in the latest year. Given the relatively small size of the charter sector in most of these cities, with the exception of Philadelphia, this does not affect the results substantially. ■ The population sizes used to derive these estimates are based on our samples, and may differ somewhat from other teacher workforce size estimates (see the Data Appendix for sample restrictions applied).

Figure 4	STUDENT/TEACHER REPRESENTATION GAP, BY RACE AND ETHNICITY AND *SECTOR [YEARS]*	The estimates in this figure represent the race- and ethnicity-based differences in relative frequencies between students and teachers (in percentage points), by sector. For example, a value of 20 percent means that the proportion of students is 20 percentage points higher than that of teachers, in a given sector and year. An upward trend indicates that students of a given race or ethnicity are becoming more overrepresented relative to teachers of that same race or ethnicity, over time.	■ Gap trends in some instances may be volatile due to small teacher samples
Figure 5	BLACK AND HISPANIC (AND, IN SOME CASES, ASIAN) TEACHERS AS A PROPORTION OF ALL TEACHERS, BY GENDER, DISTRICT SCHOOLS, *[YEARS]*	This figure shows the total proportion of male and female Black and Hispanic (and, in some cases, Asian) teachers as a percentage of all teachers, by year, for the district sector only in each city. This portrays the gender-specific representation of minority teachers in the teaching force, and whether it is changing over time.	■ Results in this figure are presented for district sectors only.
Figure 6	PERCENT OF NEW HIRES COMPARED WITH PERCENT OF ALL TEACHERS IN PREVIOUS YEAR, BY RACE AND ETHNICITY AND SECTOR *[YEARS]*	This is simply a comparison of the proportion of newly hired teachers of each race/ethnicity in a given sector, with the proportion of citywide teachers of that same race/ethnicity in the previous year. This permits a rough assessment of whether hiring patterns are serving to increase or decrease the representation of each race and ethnicity in the teaching force. The measure is presented in terms of percentage points. If, for example, 10 percent of new hires in one year were Hispanic, and 12 percent of all teachers in the next year were Hispanic, then the value presented in this figure would be +2, which would suggest that new hires in this particular year served to increase the representation of Hispanic teachers (though actual impact on the representation gaps depends on hiring as well as retention).	■ In our analysis, "new hires" are teachers who appear in our dataset for the first time. Teachers who appear, leave, and then reappear are coded as new hires upon their first, but not their second, appearance. ■ In all years, teachers identified as new hires may include teachers who were previously employed at some point before our dataset begins, as well as previously employed at charter schools during the years included in our dataset. Some teachers also may be identified as new hires if they switched from a non-teaching to a teaching position within the sector. ■ In several of our cities, the previous year citywide proportion to which the district sector new-teacher distributions are compared shifts in the year in which charters become available in our datasets (i.e., the citywide distribution includes charter teachers).

Figure 7	SECTOR LEAVER RATES, BY RACE AND ETHNICITY AND SECTOR, *[YEARS]*	Each bar in this graph indicates the proportion of teachers who left the sector, by race and ethnicity, in each year of our dataset. The purpose is to provide a rough idea of the frequency of leaving for each race/ethnicity/sector combination, in order to assess whether teachers of some races/ethnicities exhibit higher leaving rates than others, and whether these comparisons change over time	■ In all cities except Chicago, at least those for which we have teacher-level data that can be linked across years, "sector leavers" are identified as those who "left the dataset" at some point and did not return. This means that: (1) these leavers did not necessarily leave teaching, as they may have switched to a different city; (2) they did not necessarily leave the city, as they may have switched from a charter to a district school, or vice-versa; (3) they did not necessarily leave the sector, as they may have switched from a teaching to a non-teaching position; and (4) some leavers will be identified as such, despite having returned (in a year beyond the end of our datasets).
Figure 8	NEW TEACHER CUMULATIVE SECTOR LEAVER RATES, BY RACE AND ETHNICITY AND SECTOR, *[YEARS]*	This table presents cumulative attrition rates of new hires, by race/ethnicity, pooled across all years of our data. Comparing the estimates between ethnicities gives an idea of whether new teachers of some races/ethnicities stay longer than their colleagues of other races/ethnicities.	■ Because these estimates are pooled across years, each row of the table includes a slightly different group of new-teacher cohorts. Specifically, the final row of the table includes only the first new-teacher cohort in our data (the second year we have for that sector), the second-to-last row includes the first two cohorts, and so on. This, in addition to the fact that the years of available data vary, means that these figures should not be compared across sectors or cities. ■ See the descriptions of how new hires and sector leavers are identified, above. ■ As is the case for several of our figures and tables, some of the new-teacher cohorts, particularly those in charter sectors, are very small samples, and the cumulative attrition rates should be interpreted carefully.
Figure 9	AVERAGE STUDENT FRL RATE AND PERCENT MINORITY STUDENTS, BY SECTOR AND TEACHER RACE AND ETHNICITY, POOLED *[YEARS]*	This figure presents the average school-level free and reduced-price lunch (FRL) rate and average percent of students who are Black or Hispanic (and, in some cases, Asian) by teacher ethnicity, pooled across all years of our data. The purpose is to provide a rough idea of the characteristics of the students in the schools in which the typical teacher of each race and ethnicity works.	■ Note that these figures are teacher averages, not student averages. ■ District and charter figures are (in most cities) based on different years of data. These estimates should not be compared across sectors or cities. ■ We present the pooled estimates here, rather than the disaggregate trend, for easier viewing, and also because the between-ethnicity gaps in FRL and minority rates tend not to vary substantially over time. Estimates for each year are available in the master data tables. ■ Some teachers (and, in a couple of cases, some years) may be excluded from these results due to missing school-level data, because, for example, the school failed to report the data, or because they are listed as employed in district offices (see the city/sector data tables for match rates).

Teacher and Student Diversity in Boston Public Schools

1. SUMMARY OF FINDINGS

Although a 1985 federal court mandated that Boston act to diversify its teaching workforce,[1] Blacks and Hispanics constituted only about 30 percent of the Boston teacher force in 2011, even though Black and Hispanic students constituted more than three-quarters of the city's public school student body. The proportion of Black teachers in the city declined modestly between 2001 and 2011, and the population of Black teachers experienced a substantial loss. The share of White and Hispanic teachers remained relatively stable, with only slight changes in population. In both the district and charter sectors, hiring patterns served to decrease the proportion of Black teachers and increase White representation, but this was partially offset by slightly higher sector leaver rates among White teachers than Black teachers.

BOSTON DATASET		
	District	**Charter**
Type of data	Teacher level	Teacher level
Years available	2001–2011	2007–2011
Linked b/w years	Yes	Yes
Multiracial category	No	2007–2011
Total sample size	53,139	2,552

2. SNAPSHOT OF TEACHER AND STUDENT RACE AND ETHNICITY IN BOSTON PUBLIC SCHOOLS

In 2011, our most recent year of data, nearly 80 percent of the students attending Boston's public schools, pooled across district and charter sectors, were Black or Hispanic. Yet only about 3 in every 10 teachers were Black or Hispanic (Figure BOS-1).

FIGURE BOS-1: SNAPSHOT OF STUDENT AND TEACHER RACE AND ETHNICITY, 2011
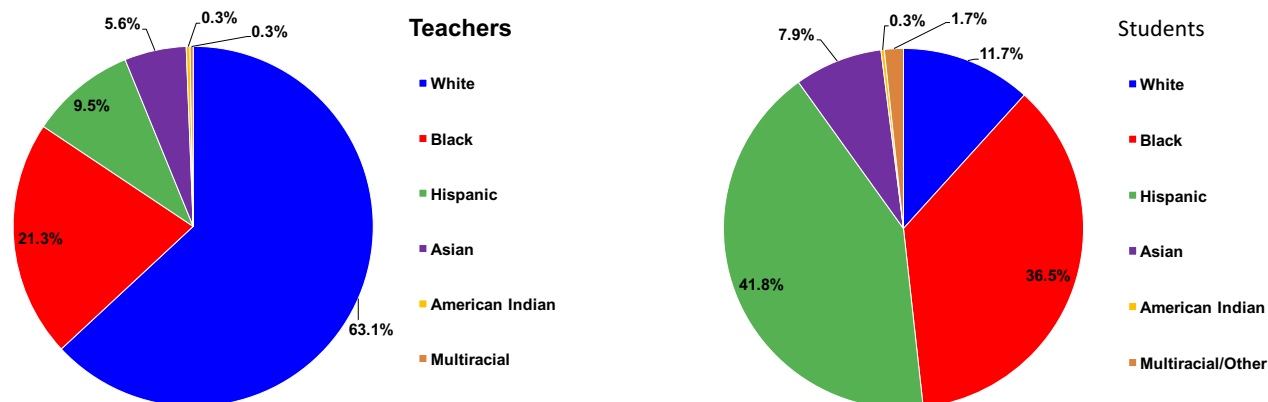
Teachers
- White — 63.1%
- Black — 21.3%
- Hispanic — 9.5%
- Asian — 5.6%
- American Indian — 0.3%
- Multiracial — 0.3%

Students
- White — 11.7%
- Black — 36.5%
- Hispanic — 41.8%
- Asian — 7.9%
- American Indian — 1.7%
- Multiracial/Other — 0.3%

FOOTNOTE TO FIGURE: The "Multiracial" response was not available to teachers in district schools in 2011, but it was available to charter teachers and thus is retained in the figure above.

This disparity was more pronounced in Boston's charter schools (see Tables BOS-A and BOS-B), but both sectors exhibit large gaps between the race and ethnicity of students and teachers.

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1   See Morgan v. Nucci (D. Mass. 1985) (https://casetext.com/#!/case/morgan-v-nucci) and Vaznis, J. (Jan. 20, 2014). "Officials in Boston Seeking Black Teachers: More Diversity Is Recruitment Goal; Imbalance Could Bring Litigation. The Boston Globe.

2   When interpreting levels or trends in race and ethnicity distributions in this profile, particularly between sectors, note that the "Multiracial" category was available to charter school teachers in all years (2007–2011) but not for district school teachers in any years. The relative frequencies are available, by year, in Tables BOS-A and BOS-B.

3. TRENDS IN THE BOSTON PUBLIC SCHOOL STUDENT BODY AND TEACHING FORCE

Between 2001 and 2011, the proportions of White and Hispanic teachers remained relatively stable or grew slightly, while the share of Black teachers decreased modestly (about 3 percentage points).[2] This is seen in Figure BOS-2.

FIGURE BOS-2: TEACHER RACE AND ETHNICITY DISTRIBUTION, BY SECTOR, 2001–2011
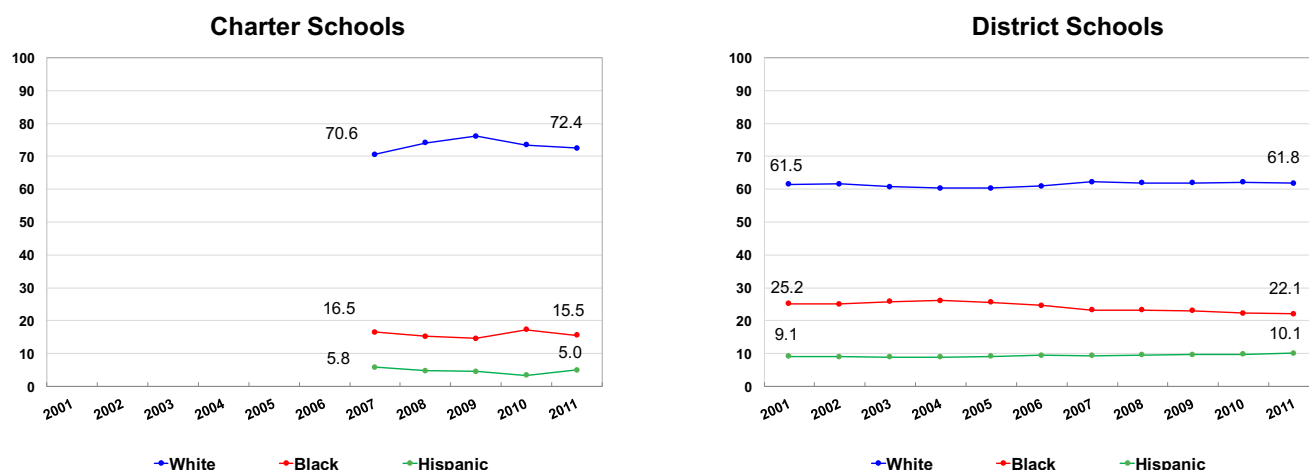
Figure BOS-3, which includes teachers in both the charter and district sectors, presents another way to visualize these data. Here, we see changes within each racial and ethnic category over the period of our data.

FIGURE BOS-3: TEACHER POPULATION CHANGES BY RACE AND ETHNICITY, 2001–2011
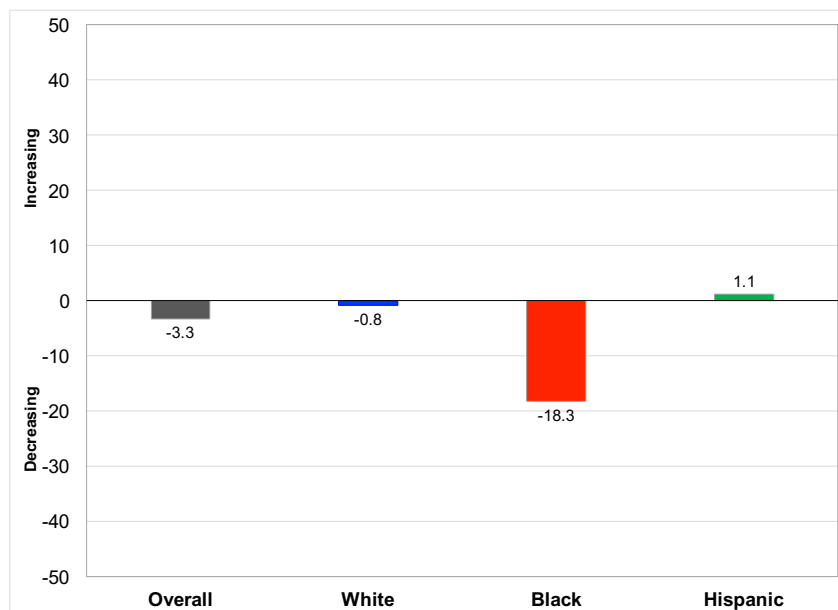
Differences in group sizes for the various racial and ethnic categories can mean that relatively modest changes in one group's proportional share can actually represent a fairly large shift within that category. For example, while the proportion of Black teachers in the district declined by only about 3 percentage points during this period, the number of Black teachers actually fell by more than 18 percent. Meanwhile, the small changes in the shares of White and Hispanic teachers resulted in only slight swings in the number of White and Hispanic teachers, from a decline of roughly 1 percent in the number of White teachers to an increase of roughly 1 percent in the number of Hispanic teachers.

Figure BOS-4 illustrates the trends in the "representation gaps" between Black and Hispanic students and teachers (the proportion of students minus that of teachers, in percentage points), by sector. In general, the gap between the share of Black students and Black teachers declined, while the opposite trend was found for Hispanic students and teachers. This was driven almost entirely by changes in the racial and ethnic composition of the student body.

FIGURE BOS-4: STUDENT-TEACHER REPRESENTATION GAP, BY RACE AND ETHNICITY AND SECTOR, 2001–2011
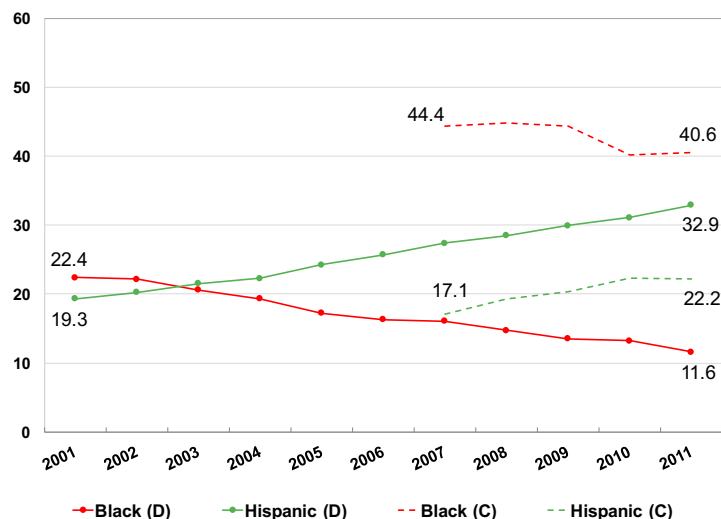
The fact that teaching is a female-dominated occupation means that Black and Hispanic men constitute only a small proportion of Boston's total teacher force (Figure BOS-5), resulting in a demographic mismatch that is particularly acute for Black and Hispanic boys.

FIGURE BOS-5: BLACK AND HISPANIC TEACHERS AS A PROPORTION OF ALL TEACHERS, BY GENDER, DISTRICT SCHOOLS, 2001–2011
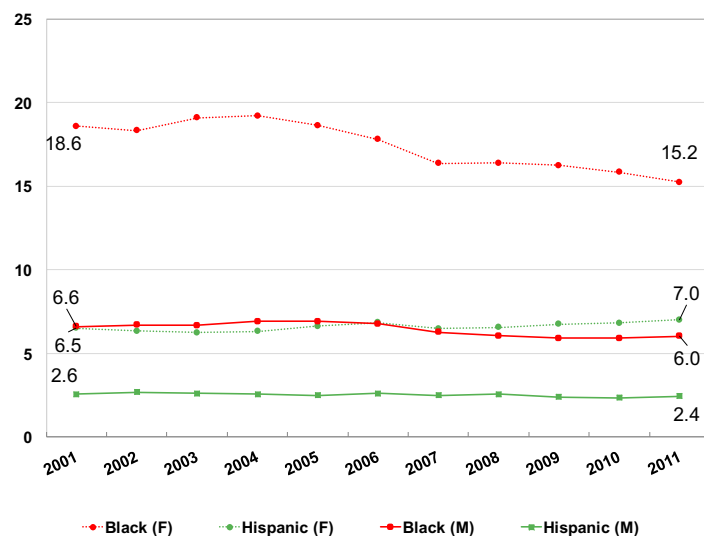
Interestingly, though, while the trends for males remained stable over time, Boston's Black female teachers experienced a modest decline (nearly 4 percentage points since 2001).

4. ARE NEW HIRES CONTRIBUTING TO TEACHER DIVERSITY IN BOSTON PUBLIC SCHOOLS?

Between 2002 and 2011, the proportion of district teachers in our dataset who were new hires each year (or, more accurately, teachers who were new to the sector—see "About the City Profiles") was roughly 9-10 percent, on average. As is the case elsewhere, these rates tended to be a bit higher in the earlier years of our data than in the latter years, most likely due to recession-related budget cuts. Charters' "hiring rates" were consistently higher than those of district schools, sometimes drastically higher, no doubt due to the combination of rapid expansion within the sector and high attrition rates within the sector. Consequently, while only 1 in 10 teachers worked in a charter school between 2008 and 2011, 30 percent of new hires in our dataset were placed in charter schools.

Figure BOS-6 compares the proportion of teachers new to their sector each year, by race and ethnicity, with the overall proportions of the city's teaching force in that sector the previous year, also by race and ethnicity. Given the very small number of Hispanic teachers in Boston charter schools, they are excluded from this figure, and the estimates for Black charter teachers should be interpreted with caution (though it bears mentioning that these small samples for both Hispanic and Black teachers are precisely the issue at hand).

FIGURE BOS-6: PERCENT OF NEW HIRES COMPARED WITH PERCENT OF ALL TEACHERS IN PREVIOUS YEAR, BY RACE AND ETHNICITY AND SECTOR, 2002–2011
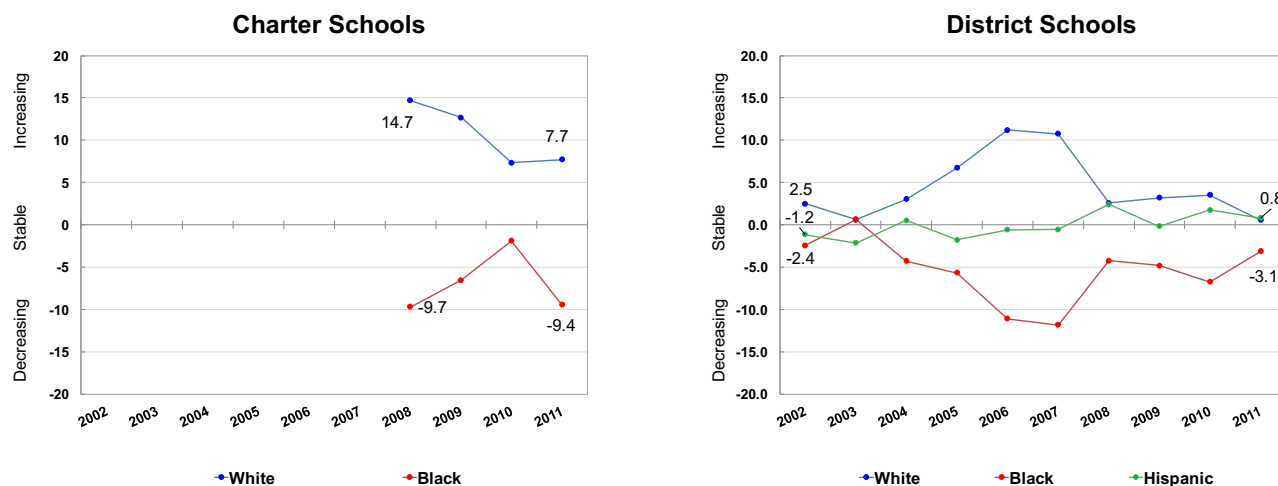
In both district and charter schools, Black representation among new hires was consistently lower than the proportion of Black teachers in the previous year, particularly in 2006 and 2007 in district schools, when the difference was greater than 10 percentage points. The opposite was the case for newly hired White teachers, who constituted a larger proportion of new teacher cohorts in every year, relative to the city's total teaching force the previous year. By contrast, Hispanic representation among district schools' new hires remained fairly similar to the share of Hispanic teachers in each previous year.

5. ARE SECTOR LEAVING PATTERNS SERVING TO DIVERSIFY BOSTON PUBLIC SCHOOL TEACHERS?

Teacher "leaver rates" (or, more accurately, "sector leaver rates"—see "About the City Profiles") in Boston district schools were about 11-12 percent, on average, between 2001 and 2011, while charter sector leaver rates fluctuated from 20-30 percent in the years between 2007 and 2011, the period for which we have charter sector data (see Tables BOS-A and BOS-B). Every year, schools must draw deeply into the pool of available candidates to fill these vacancies, which, depending on the supply of qualified replacements, may hinder efforts to improve teacher diversity. To the extent that teacher leaver rates are higher among underrepresented groups (in this case, Blacks and Hispanics), the challenge is likely to be greater.

The rates (Figure BOS-7), averaged across years, did not vary tremendously between White, Black and Hispanic teachers in either sector (Hispanic charter teachers are again excluded due to sample size), and the rates for each group were extremely similar in district schools between 2006 and 2010 (note that the rates in a given year express the proportion of that year's White, Black and Hispanic teachers who were not in the district in

any subsequent year). Where there were discrepancies (1-5 percentage points), rates tended to be higher among White teachers than Black and Hispanic teachers.

FIGURE BOS-7: SECTOR LEAVER RATES, BY RACE AND ETHNICITY AND SECTOR, 2001–2010
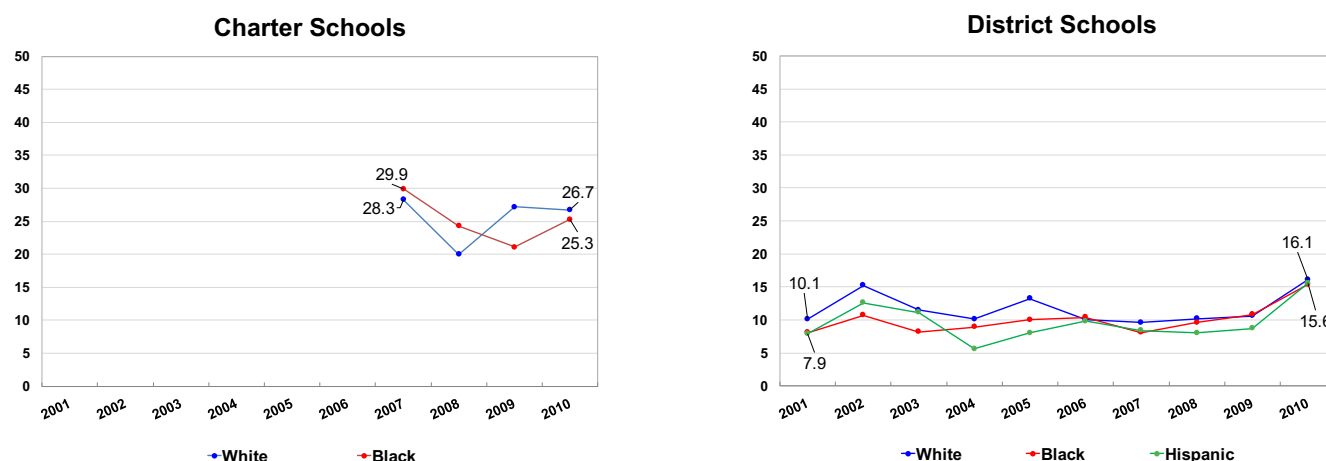
Figure notes: The year in this figure refers to the year before teachers left—e.g., the leaver rates for 2005 indicate teachers who were employed in 2005–06 and left before 2006–07.

In Figure BOS-8, we present cumulative new-teacher sector leaver rates for each sector, by race and ethnicity. Note that, for ease of presentation, these rates are not disaggregated by cohort, which means that the bottom-most row of each table includes cumulative outcomes for one new-teacher cohort (the earliest one we can identify in our dataset), the second row from the bottom includes the first two new-teacher cohorts, the third up includes the first three, and so on. In addition, rates should not be compared across sectors, as they reflect different periods of time.

FIGURE BOS-8: NEW TEACHER CUMULATIVE SECTOR LEAVER RATES, BY RACE AND ETHNICITY AND SECTOR, 2001–2011

District Sector, 2001-2011			
Percent of new teachers who leave	**White**	**Black**	**Hispanic**
Within 1 year	20.1	21.8	20.2
Within 2 years	30.7	29.5	30.8
Within 3 years	37.1	38.0	37.9
Within 4 years	40.5	41.7	42.2
Within 5 years	43.5	45.2	44.6
Within 6 years	45.2	47.1	45.6
Within 7 years	46.8	49.2	47.0
Within 8 years	47.3	50.9	47.0
Within 9 years	47.8	51.5	47.5

Charter Sector, 2007-2011			
Percent of new teachers who leave	**White**	**Black**	**Hispanic**
Within 1 year	27.7	32.4	Insufficient Sample
Within 2 years	41.7	39.7	
Within 3 years	46.5	44.1	

In the district sector, cumulative leaver rates showed only modest differences by race and ethnicity. In fact, these rates look remarkably similar when compared with the discrepancies found in other cities. Leaver rates in charter schools were also similar between new White and Black teachers.

6. WHICH STUDENTS ARE SERVED BY THE SCHOOLS IN WHICH BLACK AND HISPANIC TEACHERS WORK?

Figure BOS-9 presents the average rate of students' eligibility for free and reduced-price lunch (FRL), a rough proxy for low-income status, and the average percentages of Black and Hispanic students served by the schools where teachers of different races and ethnicities worked. Please note that these are teacher averages, not sector averages, and that they are pooled across all years, which means that they should not be compared between sectors.

FIGURE BOS-9: AVERAGE STUDENT FRL RATE AND AVERAGE PERCENT OF MINORITY STUDENTS, BY SECTOR AND TEACHER RACE AND ETHNICITY, POOLED (DISTRICT, 2001–2011; CHARTER, 2007–2011)
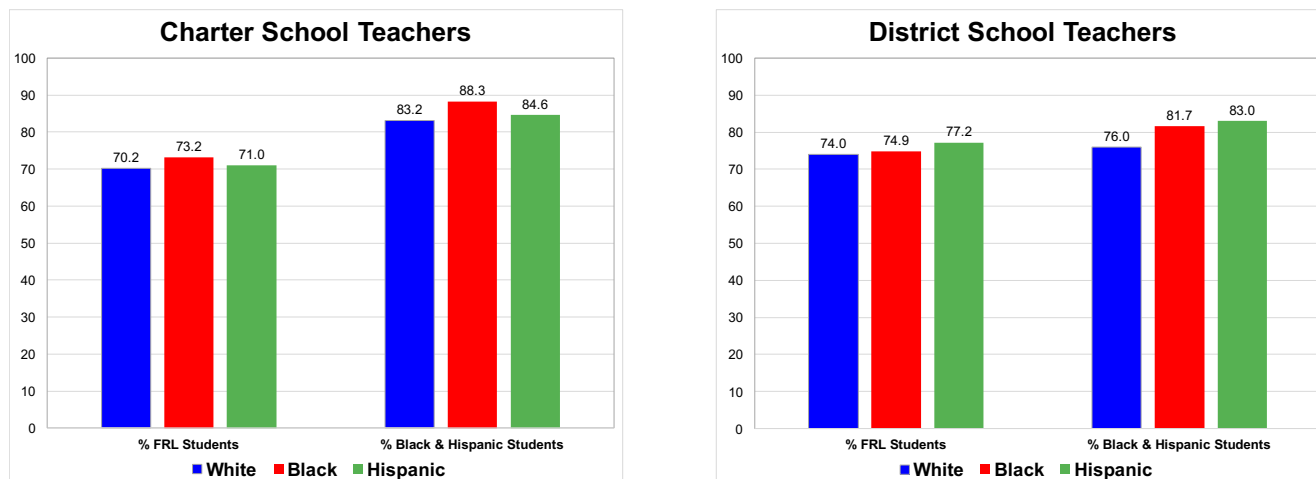
The typical Boston teacher worked in a school serving a large proportion of lower-income students (around 75 percent) and of Black and Hispanic students (nearly 80 percent). There were, however, some moderate differences in the demographics of students served by teachers of different races and ethnicities in each sector, on each measure. For instance, compared with Black and Hispanic colleagues, the typical White district teacher worked in a school that served a lower proportion of Black and Hispanic students, by a discrepancy of 5-7 percentage points.

Table BOS-A	**BOSTON CHARTER SECTOR**						
Measure		**2007**	**2008**	**2009**	**2010**	**2011**	**Pooled**
Teacher race and ethnicity distribution	White	70.6	74.1	76.1	73.5	72.4	**73.3**
	Black	16.5	15.2	14.5	17.2	15.5	**15.8**
	Hispanic	5.8	4.7	4.5	3.4	5.0	**4.7**
	Asian	4.7	3.5	2.9	3.4	4.1	**3.7**
	American Indian	0.0	0.4	0.8	0.8	0.7	**0.6**
	Multiracial	2.4	2.1	1.2	1.8	2.3	**2.0**
Teacher sample	Total observations	466	486	489	505	606	**2,552**
	Total valid observations	466	486	489	505	606	**2,552**
Student ethnicity distribution	White	12.1	12.1	12.4	12.4	11.6	**12.1**
	Black	60.9	60.0	58.9	57.4	56.1	**58.7**
	Hispanic	22.9	24.0	24.8	25.7	27.1	**24.9**
	Asian	1.7	1.8	1.8	1.8	2.8	**2.0**
	American Indian	0.0	0.0	0.0	0.0	0.2	**0.2**
	Multiracial/Other	2.5	2.1	2.2	2.7	2.2	**2.3**
	Total enrollment	4,948	5,093	5,090	5,202	6,423	
"New" teacher race and ethnicity distribution	White	◆	77.7	75.7	70.6	70.9	**73.4**
	Black	◆	12.9	15.9	20.3	12.3	**14.8**
	Hispanic	◆	5.3	4.7	2.8	8.4	**5.7**
	Asian	◆	2.4	1.9	4.9	4.4	**3.6**
	American Indian	◆	1.2	0.0	0.0	0.9	**0.6**
	Multiracial	◆	0.6	1.9	1.4	3.1	**1.9**
	Overall percent new[1]	◆	35.0	21.9	28.3	37.5	**31.0**
Sector leaver rates[2]	White	28.3	20.0	27.2	26.7	◆	**25.5**
	Black	29.9	24.3	21.1	25.3	◆	**25.2**
	Hispanic	44.4	34.8	31.8	41.2	◆	**38.2**
	Asian	36.4	35.3	28.6	17.6	◆	**30.0**
	American Indian	-	0.0	0.0	50.0	◆	**20.0**
	Multiracial	36.4	20.0	0.0	11.1	◆	**19.4**
	Overall leaver rate[1]	30.0	21.8	26.0	26.5	◆	**26.1**
Average school free/reduced price lunch rate	White	67.8	69.2	70.4	70.7	72.2	**70.2**
	Black	68.9	72.8	73.7	75.9	74.2	**73.2**
	Hispanic	67.1	70.9	73.4	75.2	70.1	**71.0**
	Asian	64.4	66.5	67.1	70.2	73.2	**68.5**
	American Indian	-	71.4	74.5	74.2	67.8	**72.0**
	Multiracial	65.7	67.8	62.0	63.2	65.6	**65.1**
Average school percent Black/ Hispanic students	White	84.1	83.2	83.2	82.9	82.7	**83.2**
	Black	91.7	87.5	89.8	87.4	85.9	**88.3**
	Hispanic	86.6	86.2	84.6	86.1	80.5	**84.6**
	Asian	86.1	83.3	80.6	86.2	87.8	**85.2**
	American Indian	-	97.1	82.8	84.5	82.9	**85.3**
	Multiracial	86.8	83.4	63.8	68.5	77.9	**77.2**
School data match rates	Free/reduced price lunch	95.9	96.9	100.0	100.0	92.9	**97.0**
	Race and ethnicity	95.9	96.9	100.0	100.0	92.9	**97.0**

◆　Estimates not applicable for this category or year

[1]　Estimates include observations with missing values on race and ethnicity question

[2]　Rates represent the proportion of teachers in a given year who did not appear in this sector's dataset in all subsequent years

General notes: Some of the estimates in this table may apply to very small samples of observations, such as those for certain race and ethnicity categories (e.g., American Indians); interpret with caution. Information on data sources, samples, and other issues in the Data Appendix. Details on all measures, including the identification of new hires and sector leavers, can be found in About the City Profiles. Relative frequencies may not add up to 100 due to rounding error.

BOSTON DISTRICT SECTOR

Measure		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Pooled
Teacher race and ethnicity distribution	White	61.5	61.6	60.7	60.3	60.3	60.9	62.2	61.9	61.9	62.1	61.8	**61.4**
	Black	25.2	25.0	25.8	26.1	25.6	24.5	23.2	23.2	23.0	22.3	22.1	**24.2**
	Hispanic	9.1	9.0	8.9	8.9	9.1	9.5	9.3	9.6	9.7	9.8	10.1	**9.3**
	Asian	4.1	4.2	4.5	4.5	4.7	4.8	5.1	5.1	5.2	5.6	5.8	**4.9**
	American Indian	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	**0.2**
	Multiracial	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	**◆**
Teacher sample	Total observations	5,194	5,185	4,769	4,782	4,806	4,875	4,873	4,857	4,661	4,720	4,418	**53,140**
	Total valid observations	5,194	5,185	4,769	4,782	4,806	4,875	4,873	4,856	4,661	4,720	4,418	**53,139**
Student ethnicity distribution	White	14.7	14.1	14.0	14.0	13.6	13.5	13.4	13.3	13.1	12.9	12.6	**13.6**
	Black	47.6	47.2	46.4	45.5	42.8	40.9	39.3	37.9	36.5	35.5	33.7	**41.2**
	Hispanic	28.4	29.3	30.4	31.2	33.4	35.2	36.7	38.1	39.6	40.9	43.0	**35.1**
	Asian	8.9	8.9	8.8	8.9	8.6	8.6	8.6	8.6	8.7	8.5	8.4	**8.7**
	American Indian	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.3	**0.4**
	Multiracial/Other	◆	◆	◆	◆	1.1	1.3	1.5	1.7	1.8	1.8	1.9	**1.6**
	Total enrollment	62,414	61,552	60,150	57,742	57,349	56,388	56,168	55,923	55,371	56,037	55,027	
"New" teacher race and ethnicity distribution	White	◆	64.0	62.2	63.7	67.0	71.6	71.7	65.5	66.2	66.8	63.8	**66.6**
	Black	◆	22.8	25.7	21.5	20.5	14.5	12.7	18.4	17.6	15.4	18.6	**18.6**
	Hispanic	◆	7.9	6.9	9.4	7.1	8.6	8.9	11.4	9.0	10.9	10.0	**8.9**
	Asian	◆	5.1	5.3	4.8	5.2	5.1	6.3	4.2	6.1	6.9	6.9	**5.5**
	American Indian	◆	0.3	0.0	0.6	0.2	0.3	0.4	0.5	1.1	0.0	0.7	**0.4**
	Multiracial	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	**◆**
	Overall percent new [1]	◆	12.2	7.6	10.9	10.0	12.5	12.5	8.0	6.0	9.9	6.6	**9.5**
Sector leaver rates [2]	White	10.1	15.2	11.5	10.1	13.2	10.0	9.6	10.2	10.6	16.1	◆	**11.7**
	Black	8.1	10.7	8.2	8.9	10.0	10.4	8.1	9.6	10.8	15.4	◆	**10.0**
	Hispanic	7.9	12.6	11.1	5.6	8.0	9.8	8.4	8.0	8.7	15.6	◆	**9.6**
	Asian	12.1	8.7	11.3	6.1	8.3	9.4	6.5	6.4	8.7	13.6	◆	**9.1**
	American Indian	0.0	11.1	0.0	18.2	18.2	27.3	10.0	9.1	16.7	0.0	◆	**11.8**
	Multiracial	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	**◆**
	Overall leaver rate [1]	9.5	13.6	10.6	9.2	11.7	10.1	9.0	9.6	10.4	15.7	◆	**10.9**
Average school free/reduced price lunch rate	White	71.5	74.5	75.0	74.7	74.4	74.9	73.3	75.4	76.2	74.6	69.3	**74.0**
	Black	71.0	74.5	74.9	75.4	74.9	74.9	74.2	77.3	78.5	76.7	72.6	**74.9**
	Hispanic	76.5	79.2	78.3	78.0	77.0	77.7	75.5	78.0	80.3	77.9	70.8	**77.2**
	Asian	69.3	72.1	73.4	72.8	73.2	73.2	71.9	75.2	76.1	76.1	71.6	**73.2**
	American Indian	76.3	79.9	80.9	79.9	79.4	81.8	79.3	80.7	79.9	82.2	73.0	**79.3**
	Multiracial	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	**◆**
Average school percent Black/Hispanic students	White	74.6	75.5	75.7	75.7	76.5	77.2	77.4	76.1	75.6	76.2	75.6	**76.0**
	Black	80.2	81.0	81.2	81.7	81.7	82.5	83.1	81.7	81.7	82.1	82.0	**81.7**
	Hispanic	84.0	84.2	84.4	84.1	84.1	83.2	83.0	81.5	81.8	81.7	81.8	**83.0**
	Asian	61.4	62.8	64.1	63.7	65.8	67.0	67.3	65.5	66.4	68.3	69.0	**65.7**
	American Indian	79.1	85.3	86.3	87.2	88.5	89.5	89.8	85.3	84.5	85.2	84.6	**86.0**
	Multiracial	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	**◆**
School data match rates	Free/reduced price lunch	84.9	85.0	82.2	81.8	83.7	84.7	85.1	85.6	85.4	85.0	82.1	**84.2**
	Race and ethnicity	84.9	85.0	82.2	81.8	83.7	84.7	85.1	85.6	85.4	85.0	83.1	**84.2**

◆　Estimates not applicable for this category or year
[1]　Estimates include observations with missing values on race and ethnicity question
[2]　Rates represent the proportion of teachers in a given year who did not appear in this sector's dataset in all subsequent years

General notes: Some of the estimates in this table may apply to very small samples of observations, such as those for certain race and ethnicity categories (e.g., American Indians); interpret with caution. Information on data sources, samples, and other issues in the Data Appendix. Details on all measures, including the identification of new hires and sector leavers, can be found in the About the City Profiles. Relative frequencies may not add up to 100 due to rounding error.

Teacher and Student Diversity in Chicago Public Schools

1. SUMMARY OF FINDINGS

In Chicago, 85 percent of students in district and charter schools were Black or Hispanic in 2011 (the most recent year for which we have data), whereas roughly half of all public school teachers were White. The share of Black teachers in Chicago schools decreased considerably from 2002 to 2011, particularly in the district sector, and the population of Black teachers experienced massive declines of nearly 2 in 5 teachers. The share of Hispanic teachers increased modestly, translating into a moderate increase in the number of Hispanic teachers. The decline in Black and concurrent increase in White representation was driven largely by hiring patterns in both sectors, but particularly in district schools. Differences among races and ethnicities in sector leaver rates were neutral in regard to Black and White teachers, but positive in terms of increasing the (somewhat small) share of Hispanic teachers.

CHICAGO DATASET		
	District	**Charter**
Type of data	Teacher level	Teacher level
Years available	2002–2011	2008–2011
Linked b/w years	Yes	Yes
Multiracial category	2010–2011	2010–2011
Total sample size	220,631	7,176

2. SNAPSHOT OF TEACHER AND STUDENT RACE AND ETHNICITY IN CHICAGO PUBLIC SCHOOLS

Citywide, half of Chicago's 2011 teacher workforce (district and charter) was White, compared with 9 percent of students. Approximately 85 percent of students were Black or Hispanic, in roughly equal proportions.

FIGURE CHI-1: SNAPSHOT OF STUDENT AND TEACHER RACE AND ETHNICITY, 2011
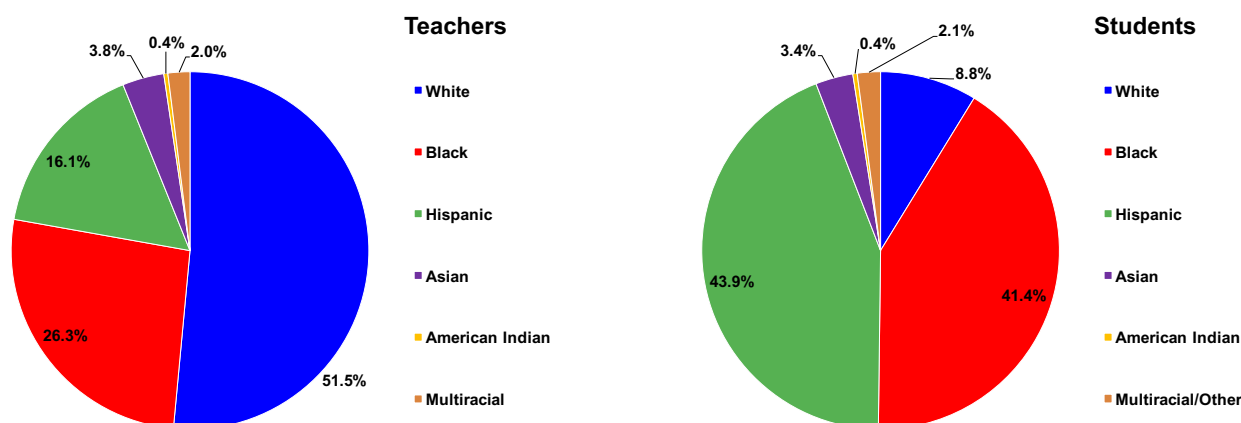
The charter sector had a larger share of White teachers (64 percent) than in the district sector (50 percent). The student population in the charter sector, however, was more Black and Hispanic, with Black and Hispanic students accounting for 95 percent of all students, compared with 86 percent in the district sector. The representation gap between Black students and teachers was nearly three times larger in the charter sector, while the representation gaps for Hispanic students and teachers were similar and large. (See Tables CHI-A and CHI-B.)

3. TRENDS IN THE CHICAGO PUBLIC SCHOOL STUDENT BODY AND TEACHING FORCE

The proportion of the Chicago teaching force that was White increased modestly in both district schools (4 per-

centage points between 2002 and 2011) and charter schools (2 percentage points between 2008 and 2011) during the periods of our datasets. During these same time periods, the proportion of Black teachers decreased considerably in district schools (about 11 percentage points) and slightly in charter schools (about 2 percentage points).

The proportion of Hispanic teachers, on the other hand, increased modestly in the district sector (nearly 4 percentage points) but remained stable, at around 7-8 percent, in the charter sector. Note, however, that the category of "Multiracial," which was added in 2010 (see Table CHI-A) and accounted for 1.9 percent of the teaching force, is likely to have had a slight effect on the shares of White, Black, Hispanic and Asian teachers. This should be kept in mind when interpreting the trends discussed throughout this profile.

FIGURE CHI-2: TEACHER RACE AND ETHNICITY DISTRIBUTION, BY SECTOR, 2002–2011
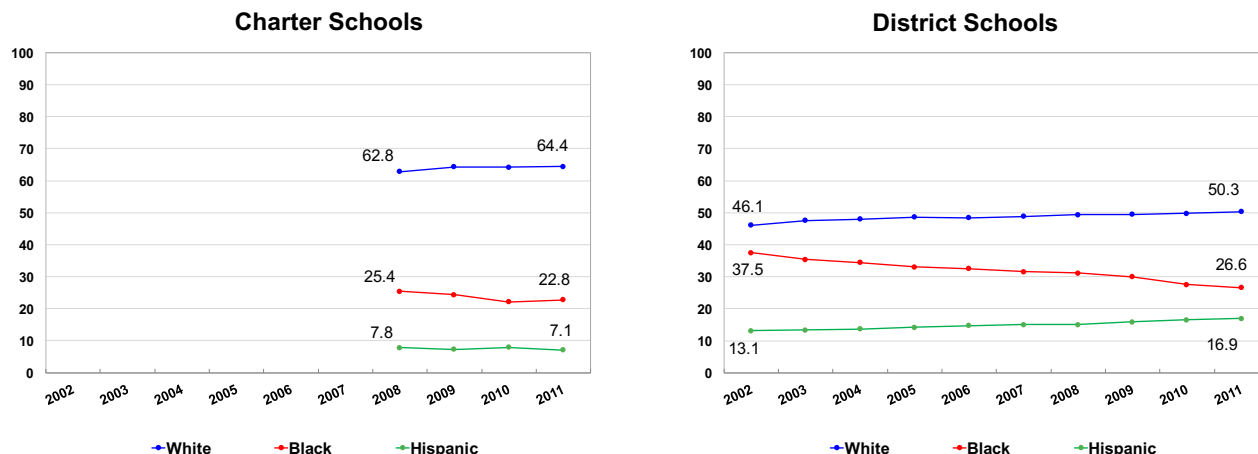
Figure CHI-3, which includes teachers in both charter and district schools, presents another way to visualize these data. Here, we see changes within each racial and ethnic category over time.

FIGURE CHI-3: TEACHER POPULATION CHANGES BY RACE AND ETHNICITY, 2002–2011
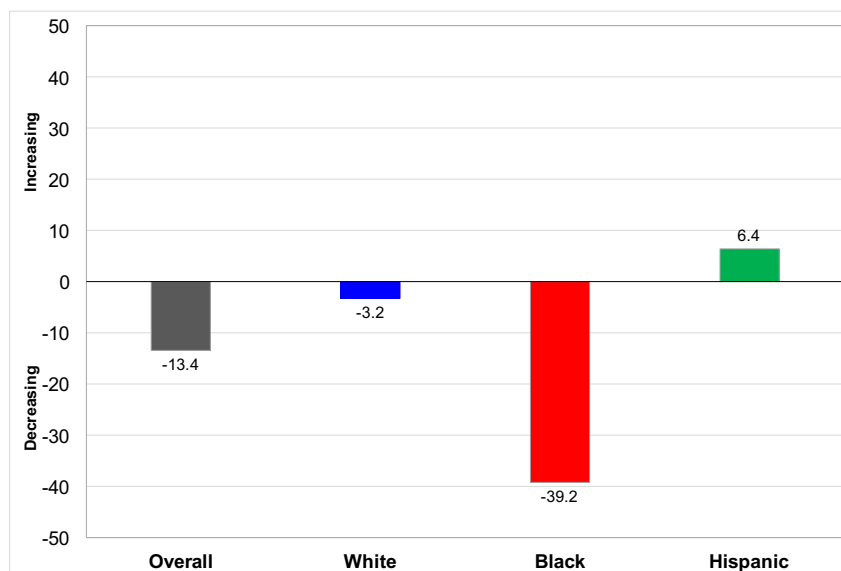
As Figure CHI-2 shows, differences in group sizes for the various racial and ethnic categories can mean that relatively modest changes in one group's proportional share can actually represent a fairly large shift within that category. For example, keeping in mind that the overall teacher force contracted by about 13 percent, we see that in Figure CHI-2 the share of White teachers increased modestly, but in CHI-3 that the actual number of White teachers declined by about 3 percent. Similarly, while the share of Black teachers decreased by about 11 percent in

district schools and 2 percent in charter schools, the overall number of Black teachers actually declined by a hefty 39 percent. Hispanic teachers, whose share of the teaching force increased modestly, grew in number by more than 6 percent.

Figure CHI-4 illustrates the trends in the "representation gaps" between Black and Hispanic students and teachers (the proportion of students minus that of teachers, in percentage points), by sector. In general, the Black representation gap remained stable, but notably, it was nearly three times higher in the charter sector than in the district sector. For Hispanics, the representation gap increased modestly in both the district and charter sectors, mostly driven by changes in the racial and ethnic composition of the student body.

FIGURE CHI-4: STUDENT-TEACHER REPRESENTATION GAP, BY RACE AND ETHNICITY AND SECTOR, 2002–2011
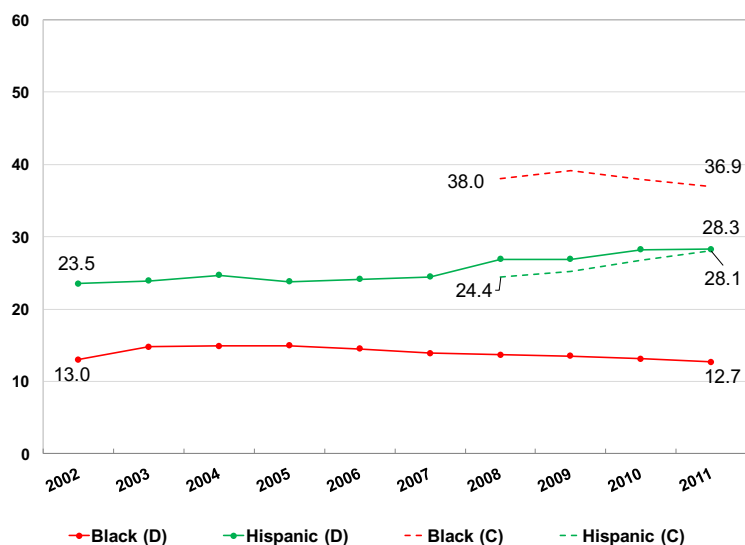
The fact that teaching is a female-dominated occupation means that Black and Hispanic men constitute only miniscule proportions of the total teacher workforce in Chicago (Figure CHI-5), resulting in a demographic mismatch that is particularly acute for Black and Hispanic boys.

FIGURE CHI-5: BLACK AND HISPANIC TEACHERS AS A PROPORTION OF ALL TEACHERS, BY GENDER, DISTRICT SCHOOLS, 2002–2011
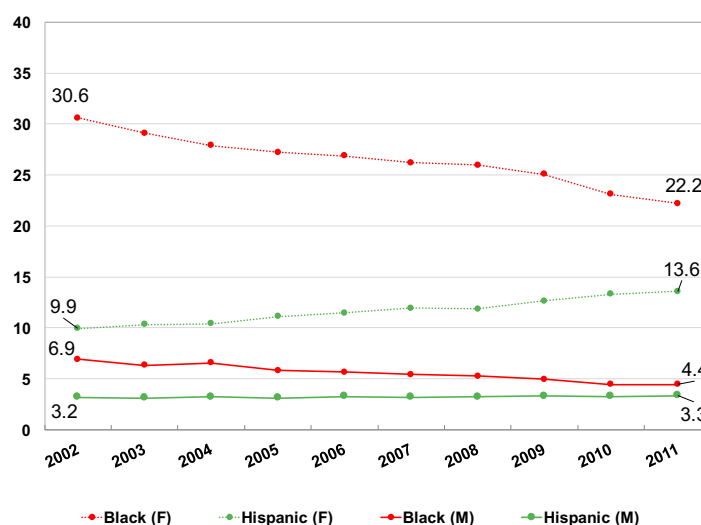
Between 2002 and 2011, the share of Hispanic male teachers was small and stable (remaining at about 3 percent of all teachers in Chicago), and the share of Black male teachers declined modestly. At the same time, the share of Hispanic female teachers increased modestly, while the share of Black female teachers declined considerably (by nearly 9 percentage points).

4. ARE NEW HIRES CONTRIBUTING TO TEACHER DIVERSITY IN CHICAGO PUBLIC SCHOOLS?

In Chicago, during the time period for which we have linked teacher-level data, new-hire rates (or, more accurately, the hire rate of teachers who were new to the sectors—see "About the City Profiles") averaged around 8-9 percent annually. In district schools, these rates were 2-4 percentage points higher between 2003 and 2007 than they were between 2009 and 2011, most likely due to recession-related budget cuts (see Tables CHI-A and CHI-B). As in almost all of the cities included in this study, hiring (and leaving) rates were considerably higher in the charter sector (around 30 percent per year). As a result, despite the fact that only about 1 in 10 teachers in our dataset was employed in the charter sector between 2009 and 2011, charters account for roughly one-third of total hires during these years.

Figure CHI-6 compares the proportion of teachers new to the city each year, by race and ethnicity,with the overall proportion of the city teaching force in that sector the previous year, also by race and ethnicity.[1] In the district sector, the proportion of new hires who were Black was consistently and meaningfully lower (by about 11 percentage points, on average) than Black representation among the city's teachers in the previous year. (Note that the rates in a given year express the proportion of that year's White, Black and Hispanic teachers who were not in the district in any subsequent year.)

FIGURE CHI-6: PERCENT OF NEW HIRES COMPARED WITH PERCENT OF ALL TEACHERS IN PREVIOUS YEAR, BY RACE AND ETHNICITY AND SECTOR, 2003–2011
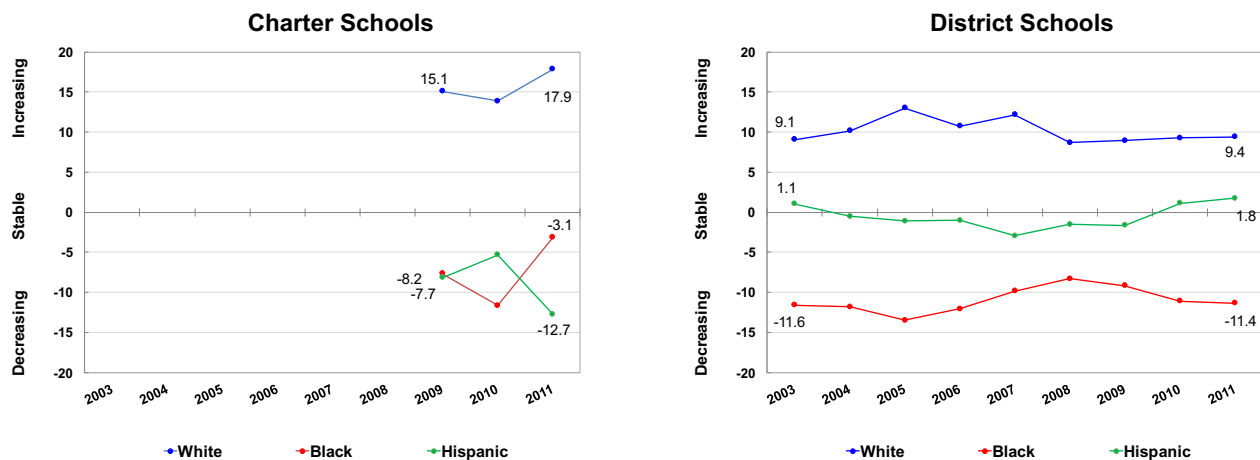
The opposite pattern holds for new White teachers in the district sector, who were consistently overrepresented vis-à-vis their share the previous year (by more than 9 percentage points every year). As for Hispanics, the share of new-teacher hires tended to mirror the existing teacher force. In the charter sector, it is harder to glean a pattern as we are using only four years of data (three new-teacher cohorts) and are limited by smaller sample sizes. That said, the representation of White teachers among new charter hires consistently was significantly higher than their share of the previous year's teaching force, and new Hispanic and Black teachers were consistently underrepresented.

5. ARE SECTOR LEAVING PATTERNS SERVING TO DIVERSIFY CHIGAGO PUBLIC SCHOOL TEACHERS?

Teacher "leaver rates" (or, more accurately, "sector leaver rates"—see "About the City Profiles") in Chicago

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1   Note that, unlike in our other districts, teachers are not identified as new hires if they previously taught in the opposite sector, nor are they identified as leavers despite return to the opposite sector at some later point. See the Data Appendix for more details.

public schools are approximately 10-11 percent annually. The leaver rate between 2008 and 2010 (the years for which we have citywide data) rose sharply in charter schools, and was considerably higher than the district rate (see Tables CHI-A and CHI-B). Every year, schools must draw deeply into the pool of available candidates to fill these vacancies, which, depending on the supply of qualified replacements, may hinder efforts to improve teacher diversity. To the extent that teacher leaver rates are higher among underrepresented groups (in this case, Blacks and Hispanics), the challenge is likely to be greater.

In Chicago district schools, teacher leaver rates did not differ consistently between White and Black teachers (see Figure CHI-7) but were modestly lower among Hispanic teachers. (Note that the rates in a given year express the proportion of that year's White, Black and Hispanic teachers who were not in the district in any subsequent year.) In the charter sector (where, once again, rates should be interpreted with caution, given the smaller samples, particularly of Hispanic teachers), leaver rates were high and volatile but appear to trend higher for Black teachers and lower for Hispanic teachers, with White teachers somewhere in between.

FIGURE CHI-7: SECTOR LEAVER RATES, BY RACE AND ETHNICITY AND SECTOR, 2002–2010
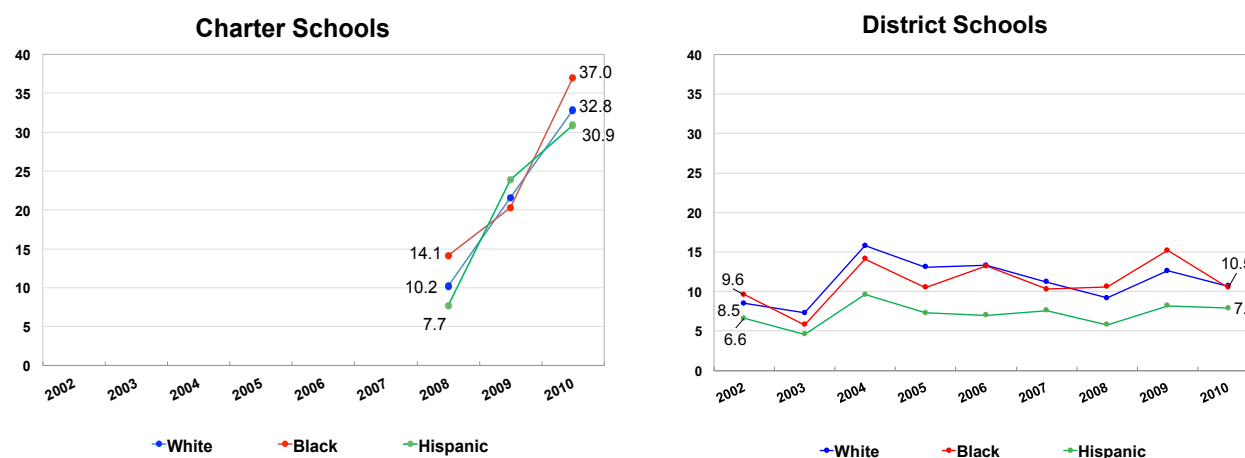
Figure notes: The year in this figure refers to the year before teachers left—e.g., the leaver rates for 2005 indicate teachers who were employed in 2005-06 and left before 2006–07.

In Figure CHI-8, we present cumulative new-teacher sector leaver rates for each sector, by race and ethnicity. Note that, for ease of presentation, these rates are not disaggregated by cohort, which means that the bottommost row of each table includes cumulative outcomes for one new-teacher cohort (the earliest one we can identify in our dataset), the second from the bottom includes the first two new-teacher cohorts, the third includes the first three, and so on. In addition, rates should not be compared across sectors, as they reflect different periods of time.

FIGURE CHI-8: NEW TEACHER CUMULATIVE CITY LEAVER RATES, BY RACE AND ETHNICITY AND SECTOR, 2002–2011

District Sector, 2002-2011			
Percent of new teachers who leave	White	Black	Hispanic
Within 1 year	17.8	16.2	10.4
Within 2 years	30.6	26.2	17.9
Within 3 years	38.6	33.3	23.5
Within 4 years	43.7	38.7	27.2
Within 5 years	46.9	42.4	29.8
Within 6 years	49.1	45.1	31.7
Within 7 years	50.6	47.3	33.6
Within 8 years	51.5	48.7	34.3

Charter Sector, 2008-2011			
Percent of new teachers who leave	White	Black	Hispanic
Within 1 year	33.1	39.9	35.1
Within 2 years	45.3	56.4	42.7

In district schools, cumulative sector leaver rates for new teachers were higher among White and Black teach-

ers, and considerably lower among Hispanic teachers. Within five years, for example, almost half (about 47 percent) of new White hires had left the sector, compared with about 42 percent of Blacks and about 30 percent of Hispanics. In the charter sector, we can only calculate rates for two cohorts; among these groups, the roughly 200 new Black charter teachers hired in 2009 and 2010 exhibit the highest levels of leaving, at least within their first couple of years. The rate of leaving in the charter sector was considerably greater than in the district sector.

6. WHICH STUDENTS ARE SERVED BY THE SCHOOLS IN WHICH BLACK AND HISPANIC TEACHERS WORK?

Figure CHI-9 presents the average rate of student eligibility for free and reduced-price lunch (FRL), a rough proxy for low-income status, and the average percentage of Black and Hispanic students served by the schools where teachers of different races and ethnicities work. Please note that these are teacher averages, not sector averages, and that they are pooled across all years, which means that they should not be compared between sectors.

FIGURE CHI-9: AVERAGE STUDENT FRL RATE AND AVERAGE PERCENT OF MINORITY STUDENTS, BY SECTOR AND TEACHER RACE AND ETHNICITY, POOLED (DISTRICT, 2002–2011; CHARTER, 2008-2011)
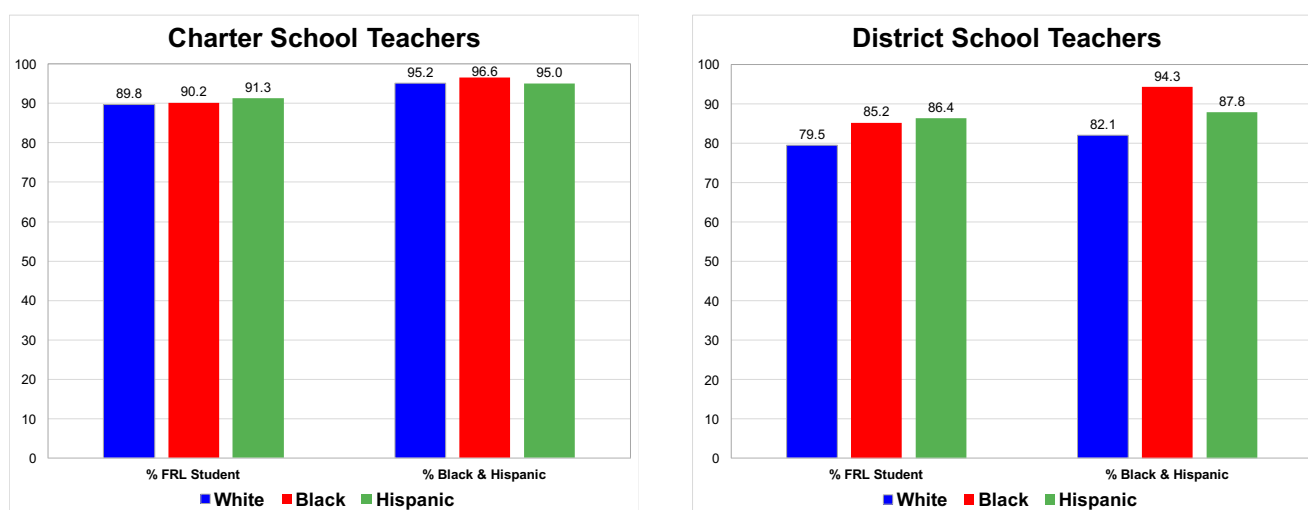
The typical Chicago teacher worked in a school in which over eight in ten students were eligible for subsidized lunch assistance, and just under nine in ten students were Black or Hispanic.

Regarding FRL rates, there were modest differences by teachers' race and ethnicity within the district sector, but little variation in the charter sector. In district schools, for instance, the typical Black or Hispanic teacher worked in a school with a FRL rate that was higher than that of the typical White teacher, by about 5–6 percentage points.

In terms of the percentages of Black and Hispanic students served, there was a little more variation by teachers' race and ethnicity in the district (but not the charter) sector. The typical Black district teacher worked in a school where about 94 percent of the students were Black or Hispanic. This rate was moderately lower for Hispanic teachers (88 percent) and especially for White teachers (82 percent).

Table CHI-A	CHICAGO CHARTER SECTOR				
Measure		**2008**	**2009**	**2010**	**2011**	**Pooled**
Teacher race and ethnicity distribution	White	62.8	64.3	64.3	64.4	**64.0**
	Black	25.4	24.3	22.1	22.8	**23.4**
	Hispanic	7.8	7.3	8.0	7.1	**7.5**
	Asian	4.0	4.1	4.4	4.5	**4.3**
	American Indian	0.1	0.1	0.1	0.1	**0.1**
	Multiracial	◆	◆	1.3	1.1	**0.7**
Teacher sample	Total observations	1,526	1,849	2,250	2,347	**7,972**
	Total valid observations	1,338	1,845	2,238	1,755	**7,176**
Student ethnicity distribution	White	3.2	2.9	2.1	1.9	**2.4**
	Black	63.4	63.4	60.6	59.7	**61.5**
	Hispanic	32.2	32.5	34.7	35.2	**33.9**
	Asian	1.1	1.2	0.9	1.1	**1.1**
	American Indian	0.1	0.1	0.2	0.2	**0.2**
	Multiracial/Other	◆	◆	1.5	1.9	**1.0**
	Total enrollment	29,012	33,552	40,278	45,478	
"New" teacher race and ethnicity distribution	White	◆	65.2	64.6	69.2	**65.4**
	Black	◆	23.2	17.9	23.8	**20.9**
	Hispanic	◆	6.5	9.9	2.9	**7.6**
	Asian	◆	5.0	5.2	3.5	**4.9**
	American Indian	◆	0.2	0.2	0.0	**0.1**
	Multiracial	◆	◆	2.3	0.6	**1.1**
	Overall percent new[1]	◆	32.8	29.3	31.4	**31.1**
City leaver rates[2]	White	10.2	21.6	32.8	◆	**23.5**
	Black	14.1	20.3	37.0	◆	**25.1**
	Hispanic	7.7	23.9	30.9	◆	**22.8**
	Asian	7.5	25.0	34.7	◆	**25.1**
	American Indian	100.0	100.0	50.0	◆	**75.0**
	Multiracial	◆	◆	25.0	◆	**25.0**
	Overall leaver rate[1]	11.0	21.6	33.6	◆	**23.9**
Average school free/reduced price lunch rate	White	✚	✚	✚	89.8	**89.8**
	Black	✚	✚	✚	90.2	**90.2**
	Hispanic	✚	✚	✚	91.3	**91.3**
	Asian	✚	✚	✚	91.1	**91.1**
	American Indian	✚	✚	✚	88.4	**88.4**
	Multiracial	✚	✚	✚	90.0	**90.0**
Average school percent Black/ Hispanic students	White	95.1	95.5	95.3	94.9	**95.2**
	Black	96.8	97.1	96.7	95.8	**96.6**
	Hispanic	93.9	95.0	95.7	95.2	**95.0**
	Asian	94.1	95.7	95.8	95.5	**95.4**
	American Indian	99.4	-	96.2	93.3	**96.3**
	Multiracial	◆	◆	93.7	94.4	**94.0**
School data match rates	Free/reduced price lunch	17.8	20.6	20.6	97.1	**36.3**
	Race and ethnicity	88.0	86.8	88.2	87.1	**87.6**

◆ Estimates not applicable for this category or year

✚ Data not available (excluded due to low match rates)

[1] Estimates include observations with missing values on race and ethnicity question

[2] Rates represent the proportion of teachers in a given year who did not appear in this sector's dataset in all subsequent years

General notes: Some of the estimates in this table may apply to very small samples of observations, such as those for certain race and ethnicity categories (e.g., American Indians); interpret with caution. Information on data sources, samples, and other issues in the Data Appendix. Details on all measures, including the identification of new hires and sector leavers, can be found in the About the City Profiles. Relative frequencies may not add up to 100 due to rounding error.

CHICAGO DISTRICT SECTOR

Measure		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Pooled
Teacher race and ethnicity distribution	White	46.1	47.6	48.0	48.7	48.4	48.9	49.3	49.5	49.8	50.3	**48.6**
	Black	37.5	35.4	34.4	33.0	32.5	31.6	31.2	30.0	27.6	26.6	**32.2**
	Hispanic	13.1	13.4	13.6	14.2	14.7	15.1	15.0	15.9	16.5	16.9	**14.7**
	Asian	2.8	3.0	3.3	3.3	3.4	3.5	3.6	3.7	3.6	3.7	**3.4**
	American Indian	0.5	0.6	0.6	0.8	0.9	0.9	0.9	0.9	0.4	0.4	**0.7**
	Multiracial	◆	◆	◆	◆	◆	◆	◆	◆	2.2	2.1	**0.4**
Teacher sample	Total observations	24,393	24,337	24,412	22,571	21,823	22,345	21,312	21,190	19,993	20,086	**222,462**
	Total valid observations	24,382	24,325	24,384	22,562	21,818	22,340	21,299	21,187	18,959	19,375	**220,631**
Student ethnicity distribution	White	9.4	9.1	8.9	8.2	8.4	8.3	9.3	9.7	9.3	9.7	**9.0**
	Black	50.5	50.2	49.3	48.0	47.0	45.5	44.9	43.5	40.6	39.3	**46.1**
	Hispanic	36.6	37.3	38.3	38.0	38.8	39.6	41.9	42.8	44.7	45.2	**40.2**
	Asian	3.3	3.2	3.3	3.2	3.3	3.4	3.7	3.8	3.7	3.7	**3.5**
	American Indian	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.4	0.4	**0.2**
	Multiracial/Other	◆	◆	◆	2.4	2.3	3.0	◆	◆	1.1	1.1	**1.0**
	Total enrollment	429,745	412,334	414,538	405,566	394,274	385,824	378,943	375,727	362,403	358,673	
"New" teacher race and ethnicity distribution	White	◆	55.2	57.8	61.0	59.4	60.6	57.6	59.1	60.0	60.7	**58.7**
	Black	◆	25.9	23.6	21.0	20.9	22.7	23.3	21.7	18.5	15.6	**22.1**
	Hispanic	◆	14.2	12.9	12.5	13.2	11.7	13.6	13.0	16.3	17.4	**13.7**
	Asian	◆	3.5	4.7	3.3	4.5	4.2	4.9	5.6	3.8	4.8	**4.3**
	American Indian	◆	1.3	1.1	2.2	2.0	0.8	0.6	0.7	0.2	0.3	**1.1**
	Multiracial	◆	◆	◆	◆	◆	◆	◆	◆	1.3	1.2	**0.2**
	Overall percent new[1]	◆	13.2	8.6	9.0	10.0	10.0	8.4	6.8	6.3	7.9	**8.0**
City leaver rates[2]	White	8.5	7.3	15.8	13.1	13.3	11.2	9.2	12.6	10.7	◆	**11.3**
	Black	9.6	5.8	14.1	10.5	13.2	10.3	10.6	15.2	10.5	◆	**10.9**
	Hispanic	6.6	4.6	9.6	7.3	7.0	7.6	5.8	8.1	7.9	◆	**7.2**
	Asian	5.1	4.2	11.9	10.6	12.3	10.9	8.6	12.0	8.7	◆	**9.6**
	American Indian	14.3	4.8	14.3	7.9	9.0	13.0	8.2	9.1	5.4	◆	**9.7**
	Multiracial	◆	◆	◆	◆	◆	◆	◆	◆	11.2	◆	**11.2**
	Overall leaver rate[1]	8.6	6.3	14.2	11.3	12.2	10.3	9.1	12.6	10.1	◆	**10.5**
Average school free/reduced price lunch rate	White	76.4	78.5	78.3	77.1	80.1	80.8	79.0	83.2	80.8	81.6	**79.5**
	Black	79.2	83.0	81.9	81.0	85.7	88.2	86.9	91.7	90.4	91.5	**85.2**
	Hispanic	83.5	84.6	84.2	83.8	86.7	87.2	86.0	89.8	88.9	89.4	**86.4**
	Asian	71.3	73.8	74.2	71.9	75.3	77.0	76.8	80.9	80.4	80.3	**76.1**
	American Indian	75.0	77.2	75.7	72.6	73.8	76.1	75.6	78.3	78.5	82.8	**76.0**
	Multiracial	◆	◆	◆	◆	◆	◆	◆	◆	83.2	84.4	**83.8**
Average school percent Black/ Hispanic students	White	81.6	82.3	83.2	83.3	83.4	82.6	82.1	81.5	80.5	79.7	**82.1**
	Black	93.6	93.6	94.0	94.0	94.5	94.7	94.8	94.9	94.7	94.7	**94.3**
	Hispanic	86.8	87.1	87.6	88.0	88.7	88.4	88.0	88.0	88.0	87.7	**87.8**
	Asian	66.8	68.3	69.6	70.7	73.3	72.4	72.8	72.4	71.5	71.3	**70.9**
	American Indian	73.6	74.9	73.4	74.7	73.1	73.4	72.8	72.4	78.6	80.3	**74.1**
	Multiracial	◆	◆	◆	◆	◆	◆	◆	◆	84.0	83.4	**83.8**
School data match rates	Free/reduced price lunch	93.4	94.1	93.9	92.3	90.6	89.6	88.9	89.3	92.1	97.1	**92.1**
	Race and ethnicity	94.5	96.4	96.6	97.7	96.9	96.2	94.8	95.0	96.7	97.2	**96.2**

◆ Estimates not applicable for this category or year

[1] Estimates include observations with missing values on race and ethnicity question

[2] Rates represent the proportion of teachers in a given year who did not appear in this sector's dataset in all subsequent years

General notes: Some of the estimates in this table may apply to very small samples of observations, such as those for certain race and ethnicity categories (e.g., American Indians); interpret with caution. Information on data sources, samples, and other issues in the Data Appendix. Details on all measures, including the identification of new hires and sector leavers, can be found in About the City Profiles. Relative frequencies may not add up to 100 due to rounding error.

Teacher and Student Diversity in Cleveland Public Schools

1. SUMMARY OF FINDINGS

In Cleveland public schools, at the end of our study, roughly 80 percent of students were Black or Hispanic, compared with under 30 percent of teachers. Between 2000 and 2011, the proportion of Blacks in the city's teaching force declined modestly, while the (small) share of Hispanics remained stable. In terms of population shifts, the numbers of White, Black and Hispanic teachers all decreased, but the decline was considerably larger for Black teachers, with a loss of 1 in every 3 Black teachers. The racial and ethnic composition of new hires in district schools over these years generally increased diversity. Charter schools, in contrast, hired more teachers than district schools, but their hiring patterns had a negative impact on citywide teacher diversity. Concurrently, sector leaving patterns in district schools generally had little impact on teacher diversity either way, while charter school leavers were disproportionately Black, relative to their shares of the teacher workforce.

CLEVELAND DATASET		
	District	**Charter**
Type of data	Teacher level	Teacher level
Years available	2000–2011	2000–2011
Linked b/w years	Yes	Yes
Multiracial category	2008–2011	2003–2011
Total sample size	52,676	7,817

2. SNAPSHOT OF TEACHER AND STUDENT ETHNICITY IN CLEVELAND PUBLIC SCHOOLS

In 2011 (the most recent year for which we have data), 8 in 10 students attending Cleveland's public schools, pooled across district and charter sectors, were Black or Hispanic, compared with fewer than 3 in 10 teachers (Figure CLE-1).

FIGURE CLE-1: SNAPSHOT OF STUDENT AND TEACHER RACE AND ETHNICITY, 2011
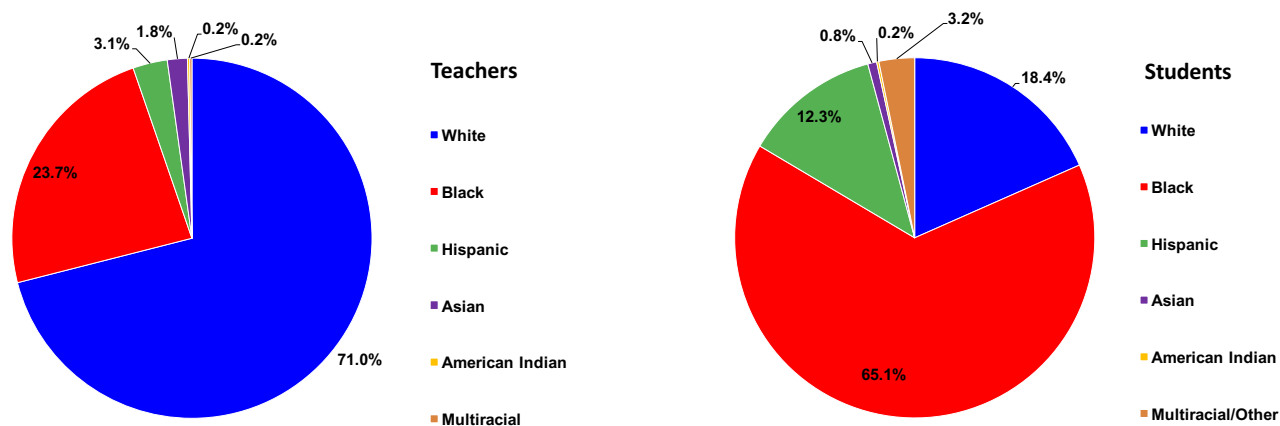
Cleveland departs from the pattern in the other eight cities in that the student population in its charter schools is whiter (by about 13 percentage points) than students in district schools. At the same time, the charter teaching force follows the pattern in the other cities in that it is whiter (by about 20 percentage points) than the district's teachers. The gap between Black students and teachers is still greater in charters (by about 7 percentage points), while the gap between Hispanic teachers and students is similar in both sectors.

3. TRENDS IN THE CLEVELAND PUBLIC SCHOOL STUDENT BODY AND TEACHING FORCE

Prior to discussing diversity trends in Cleveland's public school teaching force, it is important to note that our

sample of charter school teachers is small for the first few years (because the charter sector was small during those years), and, even in the latter years of our data, when the charter sector is larger, it only includes about 20 Hispanic teachers. These small samples mean that the results for charter teachers in the early years, and those for Hispanic charter teachers across all years, should be interpreted with extreme caution (it bears mentioning, however, that the low numbers of Black and Hispanic teachers is precisely what is at issue). We have therefore excluded Hispanic charter teachers from some of the graphs below (although the results are still available in Table CLE-A).

That said, citywide, between 2000 and 2011, the proportion of the Cleveland teaching force that was White increased by about 4 percentage points (Figure CLE-2), while the share of Black teachers decreased moderately (about 6 percentage points, with most of the loss coming in the charter sector) and low Hispanic representation remained relatively stable.[1]

FIGURE CLE-2: TEACHER RACE AND ETHNICITY DISTRIBUTION, BY SECTOR, 2000–2011
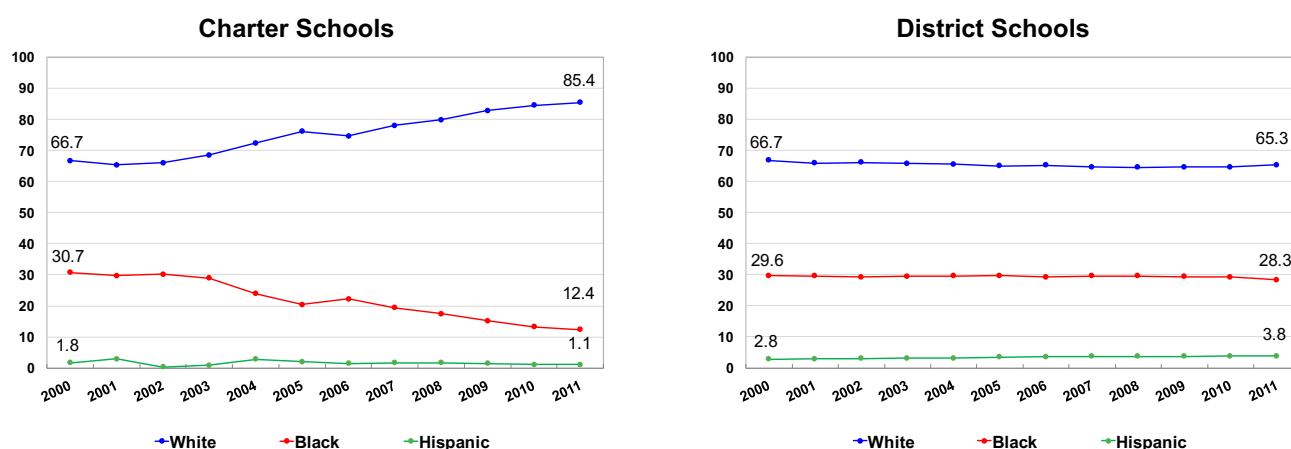
Figure CLE-3, which includes teachers in both the charter and district sectors, presents another way to visualize these data. Here, we see changes *within* each racial and ethnic category during the period for which we have data.

FIGURE CLE-3: TEACHER POPULATION CHANGES BY RACE AND ETHNICITY, 2000–2011
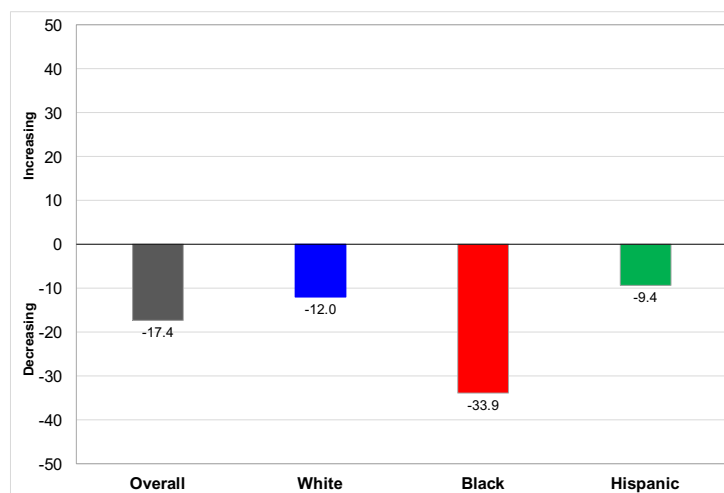
As you can see, differences in group sizes for the various racial and ethnic categories can mean that relatively

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1 When interpreting trends in race and ethnicity distributions in this profile, particularly when comparing estimates between sectors, note that the "Multiracial" category was used for charter school teachers between 2003 and 2011, and for district school teachers between 2008 and 2011. In all cases, however, the relative frequencies of multiracial teachers tend to be minimal—no more than a small fraction of 1 percent—so their impact on our results is negligible.

modest changes in one group's proportional share can actually represent a fairly large shift within that category. For example, while the proportion of White teachers in the district rose by 4 percentage points during this period, the number of White teachers actually decreased by 12 percent. Similarly, the 6-point decrease in the share of all teachers who were Black represents an almost 34 percent reduction in the total number of Black teachers. Meanwhile, the share of Hispanic teachers remained fairly stable, but the actual number of Hispanic teachers declined by more than 9 percent.

Figure CLE-4 illustrates the trends in the "representation gaps" between Black and Hispanic students and teachers (the proportion of students minus that of teachers, in percentage points), by sector. In general, these representation gaps were much greater for Black students and teachers (oscillating around 40 percent) than for Hispanic teachers and students (consistently below 10 percent). In district schools, there were only modest changes in these gaps for Blacks and Hispanics. The charter school trends were more volatile, most likely due to small sample size. Overall, the shares of Black and Hispanic students compared with the shares of Black and Hispanic teachers underwent only modest changes during the years for which we have data.

FIGURE CLE-4: STUDENT-TEACHER REPRESENTATION GAP, BY RACE AND ETHNICITY AND SECTOR, 2000–2011
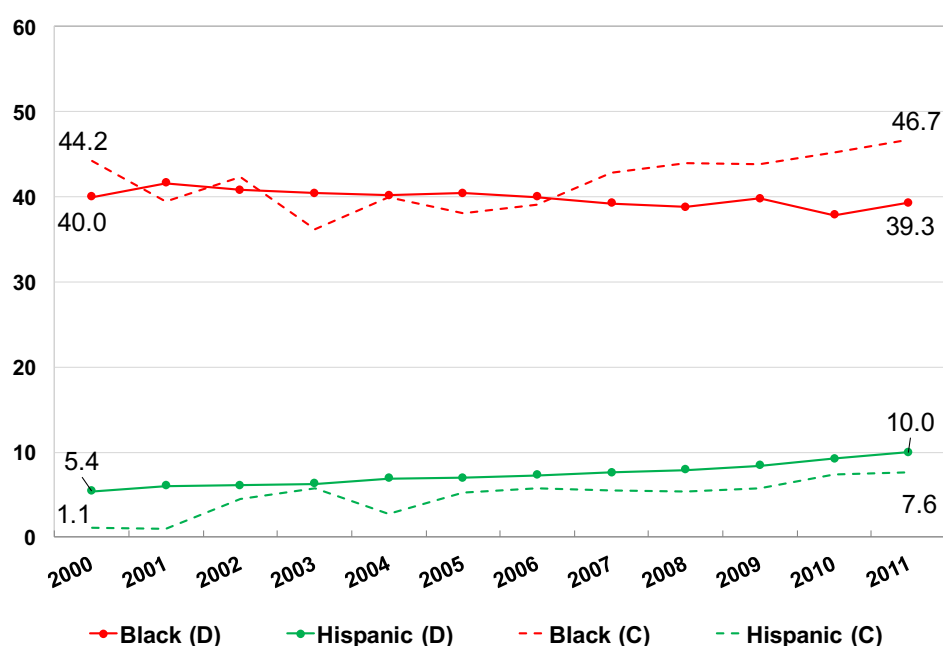
Note to figure: Sample sizes for Hispanic teachers are small. Interpret gaps with caution.

The fact that teaching is a female-dominated occupation means that Black and Hispanic men constitute only a miniscule proportion of Cleveland's total teacher force (Figure CLE-5), resulting in a demographic mismatch that is particularly acute for Black and Hispanic boys.

In district schools, the shares of Black and Hispanic male teachers, as proportions of all teachers, decreased slightly between 2000 and 2011. On average, both subgroups together represented only about 1 in 20 district teachers in Cleveland.
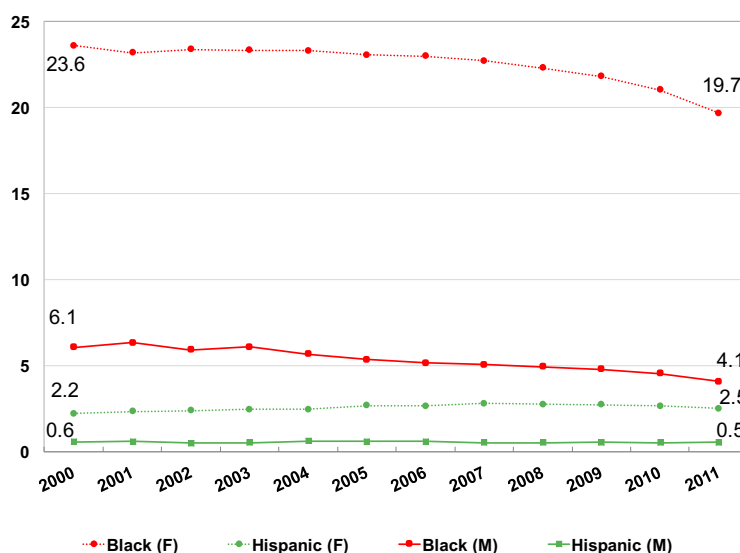
4.   ARE NEW HIRES CONTRIBUTING TO TEACHER DIVERSITY IN CLEVELAND PUBLIC SCHOOLS?

Between 2000 and 2011, the Cleveland charter sector grew from a handful of schools to serving a relatively large proportion of the city's students, while the teaching force in the district sector shrank substantially. As might be expected in a district undergoing a significant contraction, hiring rates (or, more accurately, the proportion of teachers who were new to the sector in each year—see the "About the City Profiles" section) were generally quite low in Cleveland's district schools between 2001 and 2011 (see Table CLE-B). The average rate, pooled across all years, was 4 percent, but less than 1 percent in 2004 and 2011. This must be kept in mind since the impact of the race and ethnicity distribution of new hires in any given year varies by how many teachers were actually hired.

FIGURE CLE-6: PERCENT OF NEW HIRES COMPARED WITH PERCENT OF ALL TEACHERS IN PREVIOUS YEAR, BY RACE AND ETHNICITY AND SECTOR, 2001–2011
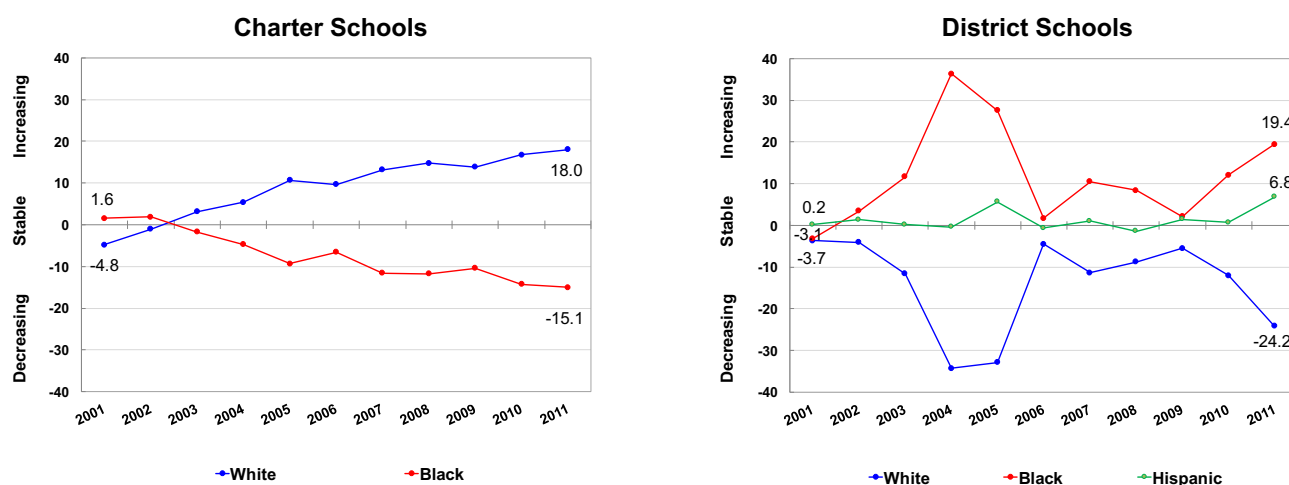
Note to figure: Sample sizes for district Hispanic teachers are small. Interpret results with caution.

Figure CLE-6 compares the proportion of new teachers each year, by race and ethnicity, with the overall proportions of the city teaching force in that sector the previous year, also by race and ethnicity.

In general, White teachers in district schools were underrepresented among new hires relative to their citywide proportions in the previous year, Black teachers were overrepresented and Hispanic teachers were neither. The spikes in Black representation among new hires, as well as the concurrent drops among new White teachers, occurred in 2004 and 2005, years in which relatively few new teachers were hired (1-2 percent of teachers in those years). As a result, these hiring patterns had minimal impact on the race and ethnicity distribution overall.

The opposite situation applies in charter schools, where rapid expansion necessitated a great deal of hiring. In fact, we identified 50 percent more newly hired charter teachers between 2001 and 2011 than we did in district schools. This means that the Cleveland charter sector, while smaller, had more potential to increase diversity citywide via hiring. This potential was not realized. In fact, the opposite was the case, as can be gleaned from Figure CLE-6. Each year, starting in 2003, the proportion of new charter hires that were Black was considerably lower than the Black share of all charter teachers in the previous year. The exact opposite applies in the case of newly hired White teachers.

5. ARE SECTOR LEAVING PATTERNS SERVING TO DIVERSIFY CLEVELAND PUBLIC SCHOOL TEACHERS?

Despite contraction in the district sector and growth in the charter sector, teacher "leaver rates" in charter schools (or, more accurately, "sector leaver rates"—see "About the City Profiles") were considerably higher than those in district schools. However, the difference in size between the sectors means that we identified twice as many leavers in district schools as in charters. Every year, schools must draw deeply into the pool of available candidates to fill these vacancies, which, depending on the supply of qualified replacements, may hinder efforts to improve teacher diversity. To the extent that teacher leaver rates are higher among underrepresented groups (in this case, Blacks and Hispanics), the challenge is likely to be greater.

Leaver rates fluctuate within sectors, but citywide, pooled across years, about 11 percent of teachers left their sectors. (Note that we cannot identify sector switchers, and to the degree to which it occurs, leaver rates in our analysis may be inflated—this is particularly relevant in Cleveland, given the charter sector's rapid growth.)

In district schools, leaver rates were relatively similar between White and Black teachers throughout most years of our study (Figure CLE-7). The rates for Hispanics were slightly lower, but only before 2006. In contrast, in charter schools, leaver rates were consistently higher among Black teachers than White teachers. (Note that the rates in a given year express the proportion of that year's White, Black and Hispanic teachers who were not in the district in any subsequent year.)

FIGURE CLE-7: SECTOR LEAVER RATES, BY RACE AND ETHNICITY AND SECTOR, 2000–2010
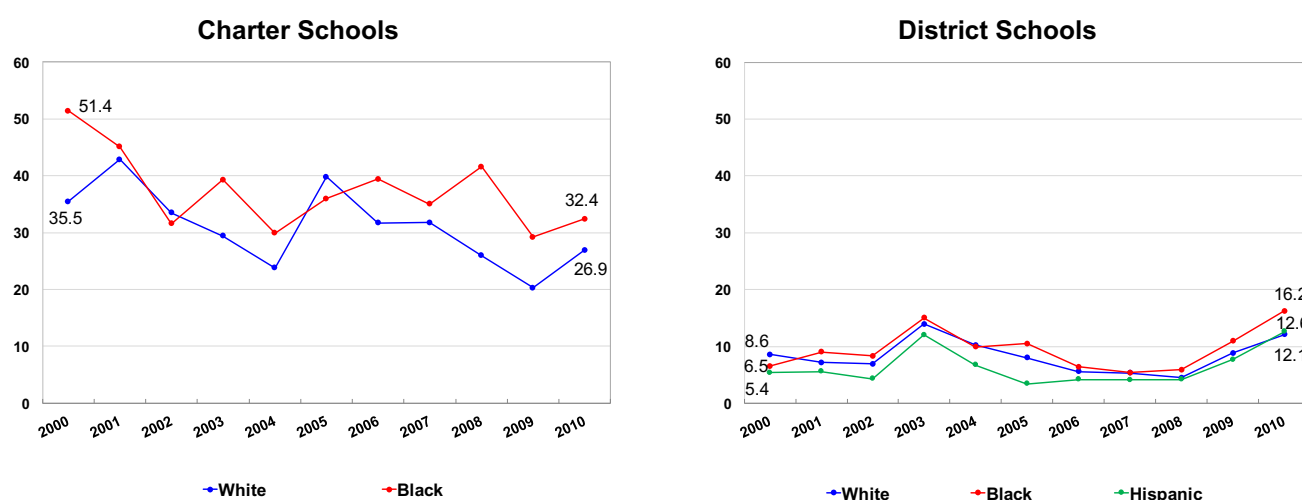
Figure notes: The year in this figure refers to the year before teachers left—e.g., the leaver rates for 2005 indicate teachers who were employed in 2005-06 and left before 2006-07. Sample sizes for Hispanic teachers, and for the charter sector in the earlier years, are small (see Table CLE-A). Interpret rates with caution.

In Figure CLE-8, we present cumulative new-teacher sector leaver rates for each sector, by race and ethnicity. Note that, for ease of presentation, these rates are not disaggregated by cohort, which means that the bottom-most row of each table includes cumulative outcomes for one new-teacher cohort (the earliest one we can identify in our dataset), the second from the bottom includes the first two new-teacher cohorts, the third up includes the first three, and so on. In addition, given the charter school expansion and district school contraction during this time period, the rates should only be compared across sectors with great caution. We also reiterate our caution about the potential influence of sample sizes on these results.

FIGURE CLE-8: NEW TEACHER CUMULATIVE SECTOR LEAVER RATES, BY RACE AND ETHNICITY AND SECTOR, 2000–2011

District Sector, 2000-2011			
Percent of new teachers who leave	White	Black	Hispanic
Within 1 year	16.2	14.7	9.2
Within 2 years	29.1	26.1	21.1
Within 3 years	44.1	37.3	36.8
Within 4 years	49.4	42.9	40.8
Within 5 years	51.8	45.5	40.8
Within 6 years	52.7	47.5	40.8
Within 7 years	53.7	48.6	40.8
Within 8 years	55.2	50.4	40.8
Within 9 years	57.1	52.3	43.4
Within 10 years	58.6	53.3	43.4

Charter Sector, 2000-2011			
Percent of new teachers who leave	White	Black	Hispanic
Within 1 year	35.0	44.5	
Within 2 years	49.7	59.3	
Within 3 years	57.5	66.8	
Within 4 years	62.1	71.0	Insuff. sample size
Within 5 years	64.1	73.7	
Within 6 years	65.9	75.5	
Within 7 years	66.3	77.1	
Within 8 years	66.7	78.2	
Within 9 years	66.9	78.7	
Within 10 years	67.0	79.1	

Note to figure: Sample sizes are small for Hispanic teachers, new-teacher cohorts in district schools and new-teacher cohorts in charter schools in the early years of our data (see Tables CLE-A and CLE-B). Interpret rates with caution.

Cumulative new-teacher leaver rates in district schools varied among White, Black and Hispanic teachers, with Whites consistently leaving at the highest rates and Hispanics consistently leaving at the lowest rates. By the end of 10 years, White teachers had left at a rate 5 percent higher than Black teachers and 15 percent higher than Hispanic teachers. In charter schools, leaver rates were higher among Blacks compared with Whites, by a consistently large margin.

6. WHICH STUDENTS ARE SERVED BY THE SCHOOLS IN WHICH BLACK AND HISPANIC TEACHERS WORK?

Figure CLE-9 presents the average rate of students' eligibility for free and reduced-price lunch (FRL), a rough proxy for low-income status, and the average percentage of Black and Hispanic students served by the schools where teachers of different races and ethnicities work. Please note that these are teacher averages, not sector averages, and that they have been pooled across all years.

Charter School Teachers

District School Teachers
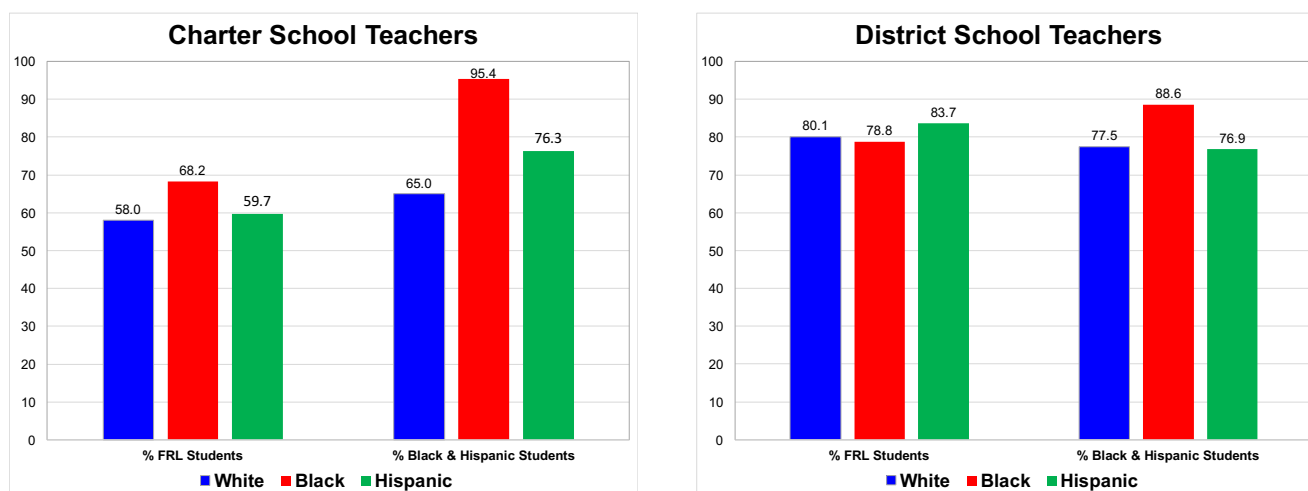
The typical Cleveland teacher worked in a school serving a large proportion of low-income students and a large proportion of Black and Hispanic students. For example, the typical Black teacher worked in racially concentrated schools, where about 90-95 percent of students were Black or Hispanic. This rate was considerably lower for White and Hispanic peers in the district sector (78 percent and 77 percent, respectively). In the charter sector, the gap between Black and White teachers was even larger—over 30 percentage points (65 percent for White teachers and 95.4 for Black teachers).

As for the FRL rate, there were slight differences in the district sector among teachers of different races and ethnicities. In the charter sector, Black teachers tended to work in schools serving considerably higher proportions of economically disadvantaged students (68 percent) when compared with their White colleagues (58 percent).

CLEVELAND CHARTER SECTOR

Measure		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Pooled
Teacher race and ethnicity distribution	White	66.7	65.3	66.0	68.5	72.3	76.1	74.6	78.0	79.9	82.7	84.5	85.4	**78.7**
	Black	30.7	29.7	30.2	28.9	24.0	20.4	22.2	19.4	17.4	15.2	13.3	12.4	**18.5**
	Hispanic	1.8	2.9	0.4	1.0	2.9	2.1	1.5	1.7	1.7	1.4	1.1	1.1	**1.5**
	Asian	0.9	2.1	3.4	1.3	0.6	1.1	1.3	0.7	0.8	0.6	0.8	0.8	**1.0**
	American Indian	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.1	0.1	0.2	0.0	**0.1**
	Multiracial	◆	◆	◆	0.3	0.2	0.2	0.3	0.2	0.1	0.0	0.1	0.3	**0.2**
Teacher sample	Total observations	114	239	262	308	488	667	745	828	931	912	1,074	1,286	**7,854**
	Total valid observations	114	239	262	308	488	666	744	827	924	903	1,069	1,273	**7,817**
Student ethnicity distribution	White	12.8	14.2	19.8	24.1	26.4	28.8	26.1	25.2	25.8	28.0	28.6	27.7	**26.4**
	Black	74.9	69.1	72.5	65.1	63.9	58.5	61.3	62.2	61.4	59.0	58.5	59.1	**61.1**
	Hispanic	2.9	3.9	4.9	6.8	5.6	7.3	7.2	7.2	7.1	7.2	8.5	8.7	**7.3**
	Asian	0.1	0.4	0.8	0.8	0.6	0.6	0.5	0.5	0.6	0.6	0.6	0.7	**0.6**
	American Indian	0.1	0.1	0.1	0.3	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.2	**0.2**
	Multiracial/Other	9.2	12.2	1.8	2.9	3.0	4.6	4.6	4.7	5.1	4.9	3.6	3.6	**4.3**
	Total enrollment	1,125	2,239	3,040	4,154	6,512	7,997	9,135	10,543	11,447	12,948	15,102	17,322	
"New" teacher race and ethnicity distribution	White	◆	61.9	64.7	69.2	71.3	76.9	76.1	79.8	81.7	81.3	84.9	87.2	**78.0**
	Black	◆	31.3	31.4	27.6	24.7	19.6	21.8	16.6	16.1	16.8	12.3	10.5	**18.9**
	Hispanic	◆	4.0	0.7	1.3	3.6	1.3	0.3	2.5	0.6	1.6	0.9	0.7	**1.5**
	Asian	◆	2.8	3.3	1.3	0.4	1.9	1.5	0.8	1.1	0.4	1.7	0.7	**1.3**
	American Indian	◆	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.0	**0.1**
	Multiracial	◆	◆	◆	0.6	0.0	0.0	0.3	0.3	0.3	0.0	0.3	0.9	**0.3**
	Overall percent new [1]	◆	73.6	58.4	50.6	56.4	46.8	45.6	43.0	38.8	28.7	32.6	34.7	**41.2**
Sector leaver rates [2]	White	35.5	42.9	33.5	29.4	23.8	39.8	31.7	31.8	26.0	20.3	26.9	◆	**29.0**
	Black	51.4	45.1	31.6	39.3	29.9	36.0	39.4	35.0	41.6	29.2	32.4	◆	**36.2**
	Hispanic	100.0	85.7	0.0	0.0	21.4	28.6	36.4	14.3	37.5	30.8	16.7	◆	**30.8**
	Asian	0.0	40.0	66.7	75.0	33.3	42.9	60.0	66.7	28.6	40.0	22.2	◆	**47.0**
	American Indian	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	100.0	◆	**50.0**
	Multiracial	◆	◆	◆	0.0	0.0	0.0	50.0	50.0	100.0	0.0	100.0	◆	**44.4**
	Overall leaver rate [1]	41.2	44.8	34.0	32.5	25.2	38.7	34.0	32.4	29.0	21.9	27.7	◆	**30.7**
Average school free/reduced price lunch rate	White	+	+	+	+	38.6	37.7	49.2	+	64.8	66.8	62.6	61.9	**58.0**
	Black	+	+	+	+	41.7	56.5	63.1	+	70.6	81.0	78.7	77.8	**68.2**
	Hispanic	+	+	+	+	32.0	47.9	47.2	+	75.4	83.7	66.6	65.8	**59.7**
	Asian	+	+	+	+	28.1	11.1	55.9	+	74.0	0.0	65.5	69.4	**47.8**
	American Indian	+	+	+	+	-	0.0	75.8	+	89.0	98.0	93.8	-	**75.1**
	Multiracial	+	+	+	+	90.2	91.7	97.8	+	63.6	-	95.0	83.8	**87.1**
Average school percent Black/Hispanic students	White	79.2	64.6	65.3	67.2	66.3	68.1	68.4	69.0	68.6	63.8	62.1	59.3	**65.0**
	Black	94.7	97.5	97.3	94.7	94.3	94.3	94.5	96.2	96.7	96.5	94.8	93.9	**95.4**
	Hispanic	100.0	78.8	94.3	86.5	59.4	67.5	71.9	70.9	83.5	91.1	82.6	78.2	**76.3**
	Asian	100.0	57.4	80.1	97.0	98.1	88.7	90.4	89.0	93.2	38.3	79.7	87.2	**82.1**
	American Indian	-	-	-	-	-	36.0	98.7	-	100.0	97.2	95.4	-	**87.1**
	Multiracial	◆	◆	◆	99.5	99.4	100.0	73.5	78.0	93.9	-	98.3	73.3	**83.7**
School data match rates	Free/reduced price lunch	38.6	29.3	53.4	51.0	79.7	81.8	83.7	0.0	84.7	89.3	88.9	89.4	**72.2**
	Race and ethnicity	57.0	71.6	79.0	85.4	79.7	81.8	83.7	83.4	84.7	89.3	88.9	89.4	**84.8**

+ Data not available
◆ Estimates not applicable for this category or year
[1] Estimates include observations with missing values on race and ethnicity question
[2] Rates represent the proportion of teachers in a given year who did not appear in this sector's dataset in all subsequent years

General notes: Some of the estimates in this table may apply to very small samples of observations, such as those for certain race and ethnicity categories (e.g., American Indians); interpret with caution. Information on data sources, samples, and other issues in the Data Appendix. Details on all measures, including the identification of new hires and sector leavers, can be found in About the City Profiles. Relative frequencies may not add up to 100 due to rounding error.

Table CLE-B	CLEVELAND DISTRICT SECTOR												
Measure		**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**Pooled**
Teacher race and ethnicity distribution	White	66.7	65.8	66.1	65.7	65.5	65.0	65.1	64.6	64.5	64.6	64.6	65.3	**65.4**
	Black	29.6	29.5	29.3	29.5	29.5	29.7	29.2	29.6	29.6	29.3	29.2	28.3	**29.4**
	Hispanic	2.8	2.9	3.0	3.1	3.1	3.5	3.6	3.7	3.7	3.7	3.8	3.8	**3.3**
	Asian	0.6	1.5	1.5	1.5	1.6	1.6	1.9	2.0	2.0	2.0	2.0	2.2	**1.6**
	American Indian	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	**0.3**
	Multiracial	♦	♦	♦	♦	♦	♦	♦	♦	0.0	0.1	0.1	0.1	**0.0**
Teacher sample	Total observations	5,247	5,559	5,497	5,385	4,340	4,185	4,031	3,989	3,896	3,846	3,585	3,152	**52,712**
	Total valid observations	5,239	5,545	5,497	5,385	4,340	4,185	4,030	3,987	3,894	3,843	3,582	3,149	**52,676**
Student ethnicity distribution	White	18.8	18.7	18.3	17.6	17.2	16.8	16.0	15.3	14.9	14.9	14.6	14.6	**16.5**
	Black	69.6	71.2	70.1	69.9	69.7	70.1	69.2	68.8	68.4	69.1	67.1	67.6	**69.2**
	Hispanic	8.2	8.9	9.1	9.4	10.0	10.5	10.9	11.3	11.6	12.1	13.0	13.8	**10.7**
	Asian	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.8	**0.7**
	American Indian	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	**0.3**
	Multiracial/Other	2.4	0.2	1.6	2.2	2.1	1.7	3.0	3.7	4.2	3.0	4.4	3.0	**2.6**
	Total enrollment	75,684	72,199	71,616	69,655	64,670	58,788	55,593	52,954	49,952	48,392	44,974	42,805	
"New" teacher race and ethnicity distribution	White	♦	63.1	61.8	54.4	31.6	33.3	62.0	55.2	58.1	61.9	56.0	45.0	**58.9**
	Black	♦	26.6	33.0	40.9	65.8	56.5	30.1	38.7	36.2	29.4	38.7	45.0	**33.5**
	Hispanic	♦	3.0	4.3	3.1	2.6	8.7	2.7	4.3	1.9	4.8	5.0	10.0	**3.6**
	Asian	♦	7.1	1.0	1.2	0.0	1.5	5.3	1.8	2.9	0.8	0.0	0.0	**3.6**
	American Indian	♦	0.3	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.1**
	Multiracial	♦	♦	♦	♦	♦	♦	♦	♦	1.0	3.2	1.3	0.0	**0.3**
	Overall percent new [1]	♦	14.1	7.3	4.8	0.9	1.6	2.8	4.1	2.7	3.3	2.1	0.6	**4.5**
Sector leaver rates [2]	White	8.6	7.2	6.9	13.9	10.2	8.0	5.6	5.3	4.5	8.8	12.1	♦	**8.4**
	Black	6.5	9.0	8.3	15.0	9.9	10.5	6.4	5.4	5.9	10.9	16.2	♦	**9.4**
	Hispanic	5.4	5.6	4.3	12.0	6.7	3.4	4.2	4.1	4.2	7.7	12.6	♦	**6.4**
	Asian	3.3	8.3	5.0	11.0	8.7	0.0	0.0	3.8	1.3	7.7	6.9	♦	**5.3**
	American Indian	15.4	0.0	7.7	0.0	7.7	18.2	0.0	0.0	0.0	0.0	0.0	♦	**5.0**
	Multiracial	♦	♦	♦	♦	♦	♦	♦	♦	0.0	20.0	20.0	♦	**18.2**
	Overall leaver rate [1]	7.9	7.7	7.2	14.1	10.0	8.5	5.7	5.2	4.9	9.3	13.2	♦	**8.5**
Average school free/reduced price lunch rate	White	80.7	80.7	83.1	84.7	84.7	83.6	85.7	+	59.4	61.8	87.7	86.8	**80.1**
	Black	78.2	76.6	81.5	81.9	82.9	83.2	87.2	+	58.9	60.8	89.9	87.6	**78.8**
	Hispanic	86.6	85.2	86.8	89.8	88.3	89.9	91.0	+	60.4	63.8	89.6	89.8	**83.7**
	Asian	81.4	68.6	79.1	75.7	74.0	73.8	77.8	+	57.5	62.8	89.8	89.3	**74.8**
	American Indian	83.1	86.8	85.0	81.9	79.4	70.1	82.2	+	56.5	56.7	90.8	90.0	**78.6**
	Multiracial	♦	♦	♦	♦	♦	♦	♦	+	59.5	44.9	91.4	95.3	**74.8**
Average school percent Black/ Hispanic students	White	76.4	76.8	77.2	77.2	77.8	77.8	78.2	78.2	79.3	79.3	76.3	76.5	**77.5**
	Black	85.3	86.7	87.8	88.5	88.4	88.9	90.4	90.6	90.7	90.8	88.8	89.8	**88.6**
	Hispanic	71.6	72.7	73.5	73.9	75.3	76.7	79.8	81.3	81.5	81.8	78.3	78.6	**76.9**
	Asian	71.6	78.7	78.9	77.7	79.3	80.8	82.1	83.4	83.6	84.6	82.3	82.7	**80.8**
	American Indian	56.3	68.0	71.7	75.8	78.5	74.5	83.1	82.9	82.4	84.6	85.2	87.0	**76.6**
	Multiracial	♦	♦	♦	♦	♦	♦	♦	♦	100.0	97.2	94.5	89.5	**94.4**
School data match rates	Free/reduced price lunch	89.4	89.7	88.3	88.2	90.4	88.6	89.9	0.0	91.7	91.4	89.9	91.0	**82.9**
	Race and ethnicity	92.8	92.6	92.0	90.2	90.4	88.6	88.9	90.9	91.7	91.4	90.4	91.0	**91.1**

+ Data not available
♦ Estimates not applicable for this category or year
[1] Estimates include observations with missing values on race and ethnicity question
[2] Rates represent the proportion of teachers in a given year who did not appear in this sector's dataset in all subsequent years

General notes: Some of the estimates in this table may apply to very small samples of observations, such as those for certain race and ethnicity categories (e.g., American Indians); interpret with caution. Information on data sources, samples, and other issues in the Data Appendix. Details on all measures, including the identification of new hires and sector leavers, can be found in About the City Profiles. Relative frequencies may not add up to 100 due to rounding error.

Teacher and Student Diversity in Los Angeles Public Schools

1. SUMMARY OF FINDINGS

In 2011, three-quarters of Los Angeles public school students[1] were Hispanic, making the Hispanic share of the city's students roughly twice as large as that of its Hispanic teachers. As a result, the city's White and Asian teachers were, to varying degrees, overrepresented compared with the students they served, while the proportion of Black students and teachers was close to parity. Between 2002 and 2011, the proportion of Black teachers declined slightly, while Asian representation among Los Angeles district teachers increased by a similarly slight amount. White, Asian and Black teachers all experienced losses in absolute numbers during this time period, with Black teachers losing the most—roughly 1 in every 3 teachers. There was, in con-

LOS ANGELES DATASET		
	District	**Charter**
Type of data	Teacher level	Teacher level
Years available	2002–2011	2002–2011
Linked b/w years	Yes	No
Multiracial category	No	2003–2011
Total sample size	318,056	40,120

trast, a meaningfully large increase in the Hispanic teacher share of the workforce in district and especially in charter schools. In the former sector, which is the only one for which we have detailed data, the increase was driven mostly by Hispanic teachers' lower "leaver" rates, relative to those of other races and ethnicities. Hiring patterns also contributed to teacher diversity, but not strongly. There was a moderate increase in the numbers of Hispanic teachers.

2. SNAPSHOT OF TEACHER AND STUDENT RACE AND ETHNICITY IN LOS ANGELES PUBLIC SCHOOLS

One important note before addressing the Los Angeles results: The relatively high Asian population among Los Angeles teachers means that we discuss trends in the representation of Asian teachers and students, in addition to the Black, White and Hispanic populations that we discuss for most other cities.

FIGURE LA-1: SNAPSHOT OF STUDENT AND TEACHER RACE AND ETHNICITY, 2011
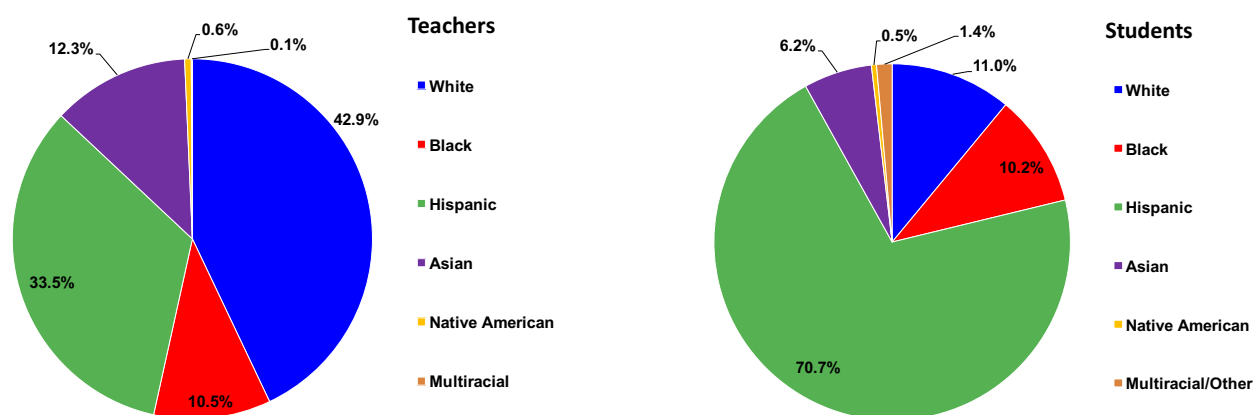
FOOTNOTE TO FIGURE: The "Multiracial" response was not available to teachers in district schools in 2011, but it was available to charter teachers and thus is retained in the figure above.

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1   In comparing the race and ethnicity distributions between sectors, note that charter teachers can be coded as "multiracial" in all but the first year of our charter data, whereas that category is not available for district teachers in any year (see Tables LA-A and LA-B). The proportion of "multiracial" charter teachers in any given year, however, is negligible (no more than 1 percent).

2   We do not have student race and ethnicity distributions for charter schools prior to 2005. These years are therefore excluded from the charter lines in Figure LA-4.

In 2011, our most recent year of data, about 84 percent of students attending Los Angeles public schools, pooled across district and charter sectors, were Hispanic (71 percent) or Black (10 percent). In that same year, 6 percent of students were Asian. Also in 2011, roughly 34 percent of teachers were Hispanic, 11 percent were Black and 12 percent were Asian (Figure LA-1).

As in all our cities, White teachers were heavily overrepresented relative to White students. In contrast to the other cities with large Asian populations, Asian teachers were also heavily overrepresented relative to Asian students. Only in Los Angeles was there virtual parity between Black students and teachers. There was a large gap between the proportion of Hispanic students and Hispanic teachers, however.

The share of White teachers in charter schools was larger than in district schools (by 10 percentage points), while the shares of Black and Hispanic teachers were smaller (by 5 percentage points each). In district schools, Black teachers were slightly overrepresented vis-à-vis students (by about 2 percentage points); the opposite held true in charter schools (where they were underrepresented by roughly 4 percentage points). Figure LA-1 shows parity in Black teachers and students because the two sectors are combined. In district schools, Hispanic teachers were underrepresented vis-à-vis students by 38 percentage points, while in charter schools, the rate of underrepresentation rose slightly to 40 percentage points (see Tables LA-A and LA-B).

3. TRENDS IN THE LOS ANGELES PUBLIC SCHOOL STUDENT BODY AND TEACHING FORCE

As Figure LA-2 illustrates, between 2002 and 2011, the proportion of White teachers in Los Angeles district schools decreased moderately (about 6-7 percentage points), and the proportion of Black teachers decreased slightly (about 2 percentage points). During the same time period, the proportion of Hispanic teachers increased moderately (about 7 percentage points), and the share of Asian teachers increased slightly (2 percentage points).

FIGURE LA-2: TEACHER RACE AND ETHNICITY DISTRIBUTION, BY SECTOR, 2002–2011
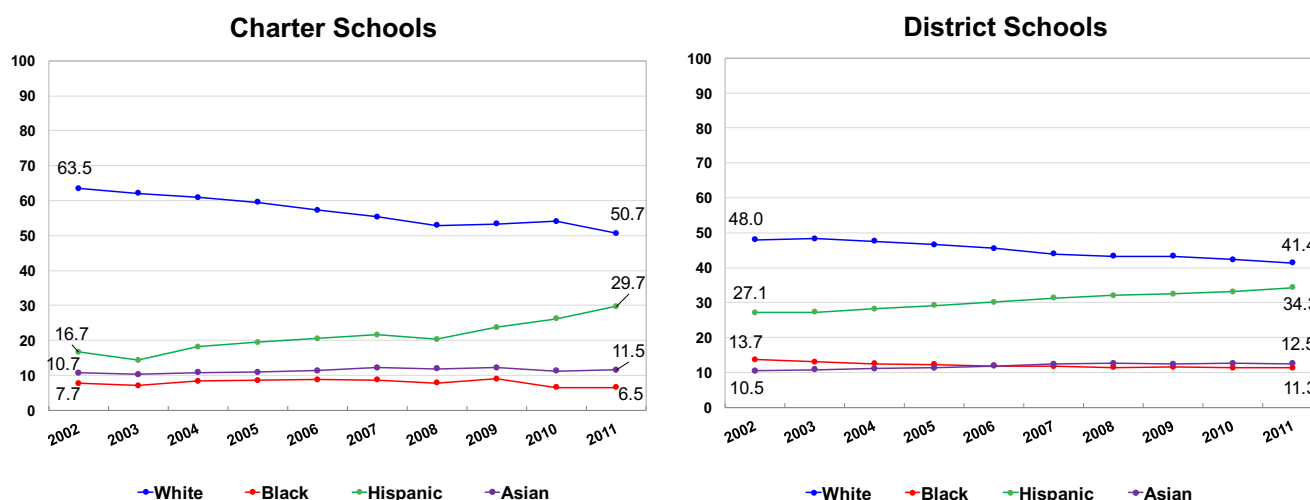
These basic trends hold for the charter sector as well, but the decline in the proportion of White teachers was steeper than in district schools, as was the increase in the proportion of Hispanic teachers, which nearly doubled between 2002 and 2011. Finally, the Asian share of the teaching force experienced a very slight increase.

Figure LA-3, which includes teachers in both the charter and district sectors, presents another way to visualize these data. Here, we see changes within each racial and ethnic category over time.
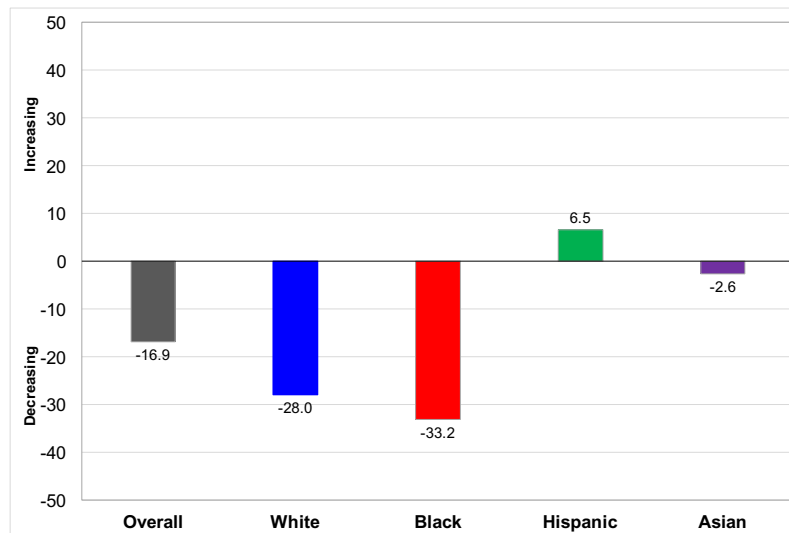
As you can see, differences in group sizes for the various racial and ethnic categories can mean that relatively modest changes in one group's proportional share can actually represent a fairly large shift within that category. For example, while the proportion of White teachers in the district decreased by a moderate 6-7 percentage points during this period, the number of White teachers actually fell by nearly 28 percent. Similarly, the 2-point decrease in the share of all teachers who were Black represents a hefty 33 percent loss in the total number of Black teachers. The share of Hispanic teachers and their numbers shifted at very similar rates. Meanwhile, the number of Asian teachers, whose share rose slightly, actually declined slightly in number (by almost 3 percent).

Figure LA-4 illustrates the trends in the "representation gaps" between Black and Hispanic teachers and students (the proportion of students minus that of teachers, in percentage points), by sector. Asian teachers in Los Angeles are overrepresented relative to Asian students and are therefore not included in this comparison. The gap between Black teachers and students was small to nonexistent in district schools over this period, while it was larger in charter schools (about 7-11 percentage points). The gap between Hispanic students and teachers in district schools declined moderately, due almost entirely to an increase in the Hispanic share of the teacher workforce. Even with this change, the Hispanic gap remained quite large.

FIGURE LA-4: STUDENT-TEACHER REPRESENTATION GAP, BY RACE AND ETHNICITY AND SECTOR, 2002–2011
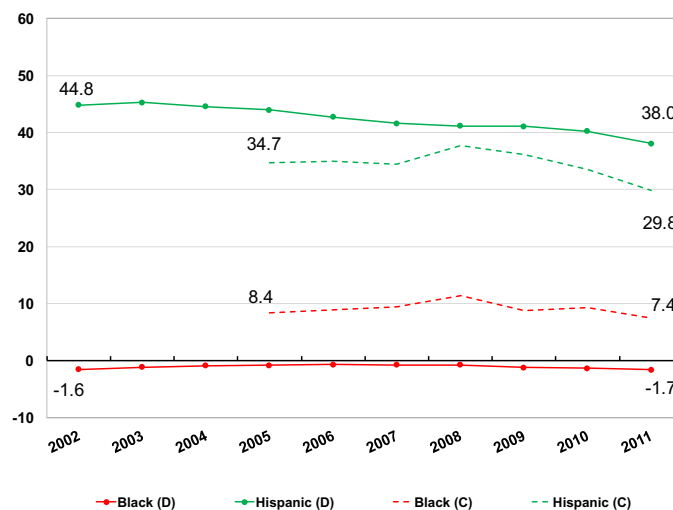
The fact that teaching is a female-dominated occupation means that minority males usually constitute a small proportion of the total teacher workforce. In Los Angeles, this was particularly true for Black and Asian men (Figure LA-5), meaning that Black and Asian boys were particularly affected by disparities in characteristics between teachers and students.

FIGURE LA-5: ASIAN, BLACK AND HISPANIC TEACHERS AS A PROPORTION OF ALL TEACHERS, BY GENDER, DISTRICT SCHOOLS, 2002–2011
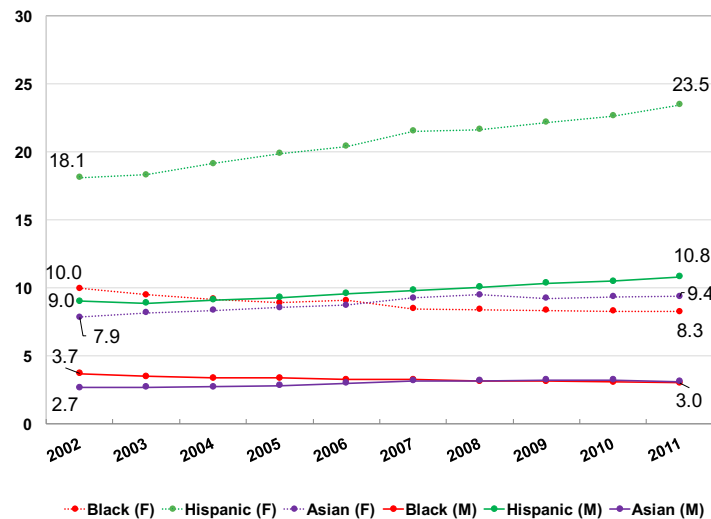
The proportional representation of male and female Hispanic teachers increased, whereas the trends were flat for both Asian and Black men and women. As a result, after 2004, the population of male Hispanic teachers in district schools actually was slightly larger than that of Black and Asian teachers of either gender.

4. ARE NEW HIRES CONTRIBUTING TO TEACHER DIVERSITY IN LOS ANGELES PUBLIC SCHOOLS?

In Los Angeles, between 2002 and 2011, the proportion of district school teachers each year who were new hires (or, more accurately, teachers who were new to the district—see "About the City Profiles") was roughly 9-10 percent, on average. As is the case elsewhere, the rates tended to be a bit higher in the earlier years of our data than in the later years, most likely due to the recession.

Figure LA-6 compares the proportion of teachers new to the district sector each year, by race and ethnicity, with the overall proportion of the teaching force in that sector the previous year, also by race and ethnicity. Unfortunately, we were not able to procure the data necessary to carry out this comparison (nor any subsequent analyses in this profile) for charter schools.

Before reviewing Figure LA-6, one should bear in mind that the hiring rate in our dataset (which, again, refers to the hiring of teachers new to the sector) went from 7-8 percent for the first years of our data down to 1-2 percent for the final three years. This means that any patterns in the racial and ethnic distribution of new hires, vis-à-vis previous years' teaching forces, would have had less impact during these later years.
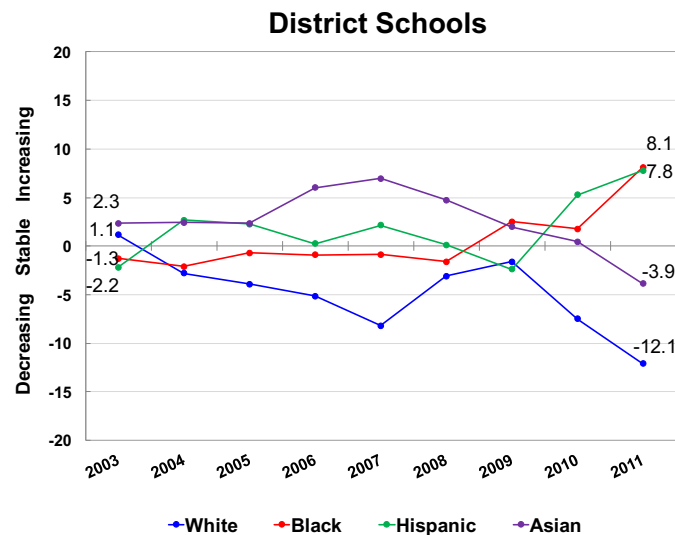
That said, between 2002 and 2009, the proportion of new Black and Hispanic hires was not very different from that of all demographically similar teachers the year before, whereas the White share of new hires was generally lower. Starting in 2009, however, the proportions of new hires who were Black and Hispanic began to increase relative to their shares in previous years, while the trend for White and Asian new hires moved in the opposite direction. (Again, though, new hiring rates for those years were quite low.)

5. ARE SECTOR LEAVING PATTERNS SERVING TO DIVERSIFY LOS ANGELES PUBLIC SCHOOL TEACHERS?

In the Los Angeles district sector,[3] teacher "leaver rates" (or, more accurately, "sector leaver rates"—see "About the City Profiles") fluctuate a bit but were around 8-9 percent, on average (Figure LA-7). Every year, schools must draw deeply into the pool of available candidates to fill these vacancies, which, depending on the supply of qualified replacements, may hinder efforts to improve teacher diversity. To the extent that teacher leaver rates are higher among underrepresented groups (in this case, Blacks and Hispanics), the challenge is likely to be greater.

As Figure LA-7 shows, leaver rates among Black and White teachers tended to be fairly similar (roughly 10-12 percent) and slightly lower for Asian teachers (between 8-10 percent). During the same years, leaver rates among Hispanic teachers were lower (roughly 6-7 percent, depending on the year). (Note that the rates in a given year express the proportion of that year's White, Black, Asian and Hispanic teachers who were not in the district in any subsequent year.)

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3   NOTE: We were not able, unfortunately, to obtain teacher-level data linked between years for Los Angeles charter schools. This means that we can only include Los Angeles charters in Figures LA-1, LA-2, LA-3, LA-4 and LA-5. See the Data Appendix for more details on our requests and the responses we received.

District Schools
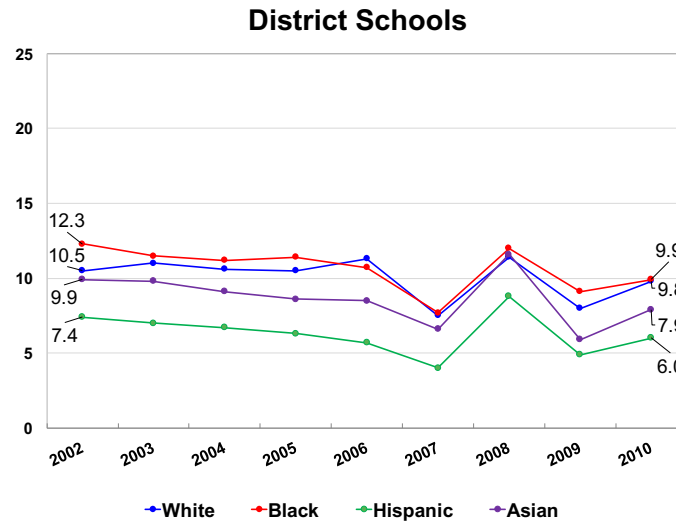
Figure notes: The year in this figure refers to the year before teachers left—e.g., the leaver rates for 2005 indicate teachers who were employed in 2005-06 and left before 2006-07.

In Figure LA-8, we present cumulative new-teacher sector leaver rates, by race and ethnicity. Note that, for ease of presentation, these rates are not disaggregated by cohort, which means that the bottommost row of each table includes cumulative outcomes for one new-teacher cohort (the earliest one we can identify in our dataset), the second from the bottom includes the first two new-teacher cohorts, the third up includes the first three, and so on.

FIGURE LA-8: NEW TEACHER CUMULATIVE SECTOR LEAVER RATES, BY RACE AND ETHNICITY, 2002–2011

District Sector, 2002-2011				
Percent of new teachers who leave	**White**	**Black**	**Hispanic**	**Asian**
Within 1 year	17.6	18.6	12.0	15.8
Within 2 years	33.6	32.7	24.3	30.1
Within 3 years	42.1	40.9	31.0	37.3
Within 4 years	47.1	45.7	34.1	40.9
Within 5 years	50.7	49.9	37.0	44.4
Within 6 years	53.0	51.7	38.7	46.2
Within 7 years	54.7	53.2	39.7	47.5
Within 8 years	55.9	54.2	40.3	48.1

Attrition rates are consistently higher for newly hired White, Asian and Black teachers, compared with their Hispanic colleagues. After three years, for example, about 4 in 10 new White and Black teachers had left the sector, compared with only around 3 in 10 Hispanic new hires.

6. WHERE DO ASIAN, BLACK AND HISPANIC TEACHERS WORK?

Figure LA-9 presents the average rate of students' eligibility for free and reduced-price lunch (FRL), a rough proxy for low-income status, and the average percentage of minority (Asian, Black and Hispanic) students served by the schools where teachers of different races and ethnicities worked. Please note that these are teacher averages, not sector averages.

District School Teachers
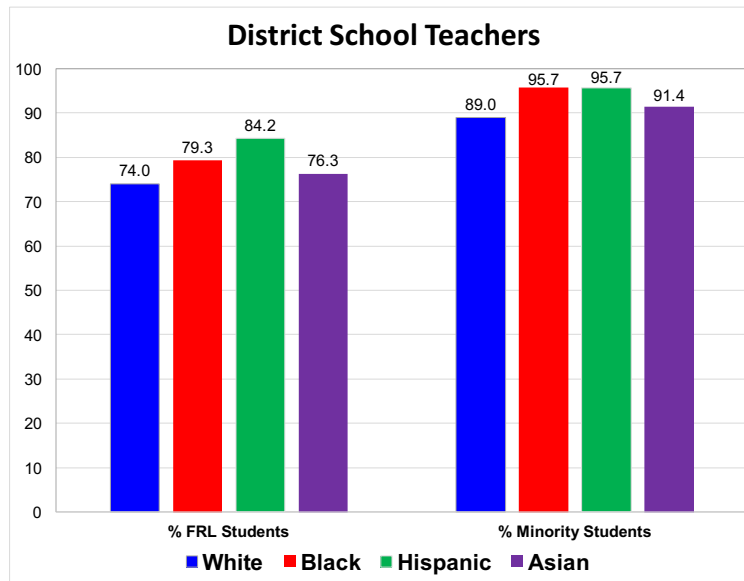
Between 2002 and 2011, the typical Los Angeles teacher, regardless of race or ethnicity, worked in a school with a high percentage of lower-income students (75-85 percent) and minority students (90-96 percent).

The average FRL rate was lowest in schools where the typical White teacher worked (74 percent), was higher for Asians (about 76 percent) and Blacks (about 79 percent), and highest for Hispanic teachers (about 84 percent).

In terms of the percent of minority students served in the typical school, once again, the lowest averages were among White and Asian teachers, and the highest were for Black and Hispanic teachers. The typical Black or Hispanic teacher worked in a school where roughly 96 percent of students were minority, compared with 89 percent for the typical White teacher and 91 percent for the typical Asian teacher. This difference in demographics of students served was even more stark when looking at schools with high concentrations of only Black and Hispanic students. In this case, the typical Black or Hispanic teacher worked in a school where roughly 91 percent of students were Black or Hispanic, compared with 81 percent of students in the school of the typical White teacher.

Table LA-A	**LOS ANGELES CHARTER SECTOR**										
Measure		**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**Pooled**
Teacher race and ethnicity distribution	White	63.5	62.1	60.9	59.5	57.3	55.4	52.9	53.3	54.1	50.7	**56.4**
	Black	7.7	7.1	8.3	8.6	8.8	8.7	7.8	9.0	6.5	6.5	**7.9**
	Hispanic	16.7	14.3	18.2	19.4	20.5	21.6	20.3	23.7	26.2	29.7	**21.6**
	Asian	10.7	10.3	10.8	10.9	11.3	12.2	11.9	12.2	11.2	11.5	**11.4**
	American Indian	1.4	1.5	1.5	1.5	1.1	1.0	1.1	1.0	1.0	0.8	**1.2**
	Multiracial	◆	4.6	0.2	0.2	0.9	1.1	6.1	0.9	0.9	0.7	**1.6**
Teacher sample	Total observations	3,197	3,033	3,611	3,793	4,054	4,378	4,623	4,783	4,924	5,473	**41,869**
	Total valid observations	3,197	3,033	3,611	3,793	4,054	4,378	4,623	4,701	4,103	4,627	**40,120**
Student ethnicity distribution	White	✚	✚	✚	9.4	9.5	9.4	9.4	9.5	9.4	11.0	**9.5**
	Black	✚	✚	✚	11.7	11.5	11.4	11.3	11.0	10.6	10.2	**11.3**
	Hispanic	✚	✚	✚	72.3	71.9	71.9	72.0	72.3	71.9	70.7	**72.0**
	Asian	✚	✚	✚	6.3	6.2	6.3	6.2	5.6	6.1	6.2	**6.2**
	American Indian	✚	✚	✚	0.3	0.3	0.3	0.3	0.3	0.4	0.5	**0.3**
	Multiracial/Other	✚	✚	✚	0.0	0.6	0.7	0.8	1.3	1.6	1.4	**0.7**
	Total enrollment	✚	✚	✚	762,651	748,769	741,712	745,966	737,569	746,683	760,733	

◆ Estimates not applicable for this category or year
✚ Data not available

General notes: Information on data sources, samples, and other issues in the Data Appendix. Relative frequencies may not add up to 100 due to rounding error.

Table LA-B	**LOS ANGELES DISTRICT SECTOR**										
Measure		**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**Pooled**
Teacher race and ethnicity distribution	White	48.0	48.3	47.5	46.5	45.6	43.9	43.3	43.3	42.3	41.4	**45.2**
	Black	13.7	13.0	12.5	12.3	11.9	11.7	11.5	11.5	11.3	11.3	**12.1**
	Hispanic	27.1	27.2	28.3	29.2	30.1	31.3	32.0	32.5	33.2	34.3	**30.3**
	Asian	10.5	10.9	11.1	11.4	11.8	12.4	12.6	12.5	12.6	12.5	**11.8**
	American Indian	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	**0.6**
	Multiracial	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	**♦**
Teacher sample	Total observations	34,559	34,563	33,906	33,425	32,626	32,277	32,267	29,639	28,497	27,208	**318,967**
	Total valid observations	34,548	34,556	33,904	33,425	32,626	32,212	32,195	29,592	28,244	26,754	**318,056**
Student ethnicity distribution	White	9.4	9.1	9.0	8.8	8.9	8.8	8.8	8.9	8.8	10.1	**9.1**
	Black	12.1	11.8	11.6	11.4	11.2	10.9	10.7	10.3	10.0	9.6	**11.0**
	Hispanic	71.9	72.5	72.8	73.2	72.8	73.0	73.2	73.6	73.4	72.3	**72.9**
	Asian	6.3	6.3	6.3	6.3	6.2	6.3	6.3	5.8	6.5	6.5	**6.3**
	American Indian	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.5	**0.3**
	Multiracial/Other	♦	0.0	0.0	0.0	0.6	0.6	0.8	1.1	1.0	1.0	**0.5**
	Total enrollment	746,852	747,009	741,367	727,319	707,626	693,680	687,534	670,745	667,251	662,140	
"New" teacher race and ethnicity distribution	White	♦	49.1	45.5	43.6	41.4	37.4	40.8	41.6	35.8	30.2	**43.7**
	Black	♦	12.4	10.9	11.8	11.3	11.0	10.1	14.0	13.3	19.5	**11.7**
	Hispanic	♦	24.9	29.9	30.5	29.4	32.2	31.5	29.6	37.8	40.9	**29.3**
	Asian	♦	12.8	13.3	13.4	17.4	18.8	17.2	14.6	12.9	8.7	**14.8**
	American Indian	♦	0.7	0.5	0.6	0.4	0.6	0.6	0.2	0.3	0.7	**0.6**
	Multiracial	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	**♦**
	Overall percent new[1]	♦	13.7	9.0	8.7	7.9	7.8	4.6	4.6	1.7	1.4	**6.6**
Sector leaver rates[2]	White	10.5	11.0	10.6	10.5	11.3	7.5	11.4	8.0	9.8	♦	**10.1**
	Black	12.3	11.5	11.2	11.4	10.7	7.7	12.0	9.1	9.9	♦	**10.7**
	Hispanic	7.4	7.0	6.7	6.3	5.7	4.0	8.8	4.9	6.0	♦	**6.3**
	Asian	9.9	9.8	9.1	8.6	8.5	6.6	11.6	5.9	7.9	♦	**8.7**
	American Indian	10.7	13.3	8.9	8.1	10.0	5.5	14.2	4.5	8.8	♦	**9.5**
	Multiracial	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	**♦**
	Overall leaver rate[1]	9.9	9.8	9.4	9.2	9.2	6.3	10.7	6.8	8.3	♦	**8.9**
Average school free/reduced price lunch rate	White	73.6	75.3	75.6	78.0	74.3	69.0	72.7	74.0	72.4	73.9	**74.0**
	Black	78.4	78.8	79.6	83.5	80.3	74.1	79.2	80.4	79.4	79.9	**79.3**
	Hispanic	84.4	86.1	86.2	87.8	85.1	77.0	83.9	84.7	83.6	83.7	**84.2**
	Asian	75.6	77.0	77.7	80.2	77.1	71.9	75.7	76.7	75.3	75.3	**76.3**
	American Indian	71.0	73.5	72.8	76.7	72.2	65.2	70.2	72.0	70.7	71.6	**71.6**
	Multiracial	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	**♦**
Average school percent minority students	White	88.3	89.0	89.4	89.5	89.4	89.0	89.0	88.9	88.7	88.6	**89.0**
	Black	95.4	95.5	95.6	95.7	95.9	95.8	95.8	95.8	95.8	95.7	**95.7**
	Hispanic	95.5	95.7	95.8	95.8	95.8	95.6	95.7	95.7	95.6	95.7	**95.7**
	Asian	90.1	90.7	91.2	91.6	91.9	91.9	91.9	91.8	91.6	91.5	**91.4**
	American Indian	85.8	87.3	87.7	87.4	86.3	85.9	86.3	86.0	85.6	85.5	**86.4**
	Multiracial	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	**♦**
School data match rates	Free/reduced price lunch	89.8	91.1	90.5	91.1	91.5	94.3	93.7	93.0	91.4	92.4	**91.8**
	Race and ethnicity	91.0	91.2	90.9	91.2	91.5	94.4	93.8	92.8	91.5	93.0	**92.1**

♦ Estimates not applicable for this category or year

[1] Estimates include observations with missing values on race and ethnicity question

[2] Rates represent the proportion of teachers in a given year who did not appear in this sector's dataset in all subsequent years

General notes: Some of the estimates in this table may apply to very small samples of observations, such as those for certain race and ethnicity categories (e.g., American Indians); interpret with caution. Information on data sources, samples, and other issues in the Data Appendix. Details on all measures, including the identification of new hires and sector leavers, can be found in About the City Profiles. Relative frequencies may not add up to 100 due to rounding error.

Teacher and Student Diversity in New Orleans Public Schools

1. SUMMARY OF FINDINGS

In New Orleans public schools (across all types and operators) in 2012,[1] 9 in 10 students were Black or Hispanic (mostly the former), compared with only about half of the teachers. Between 2002 and 2012, the Black share of the city's teachers declined dramatically, while the White share increased by a similarly large magnitude. This translated into a massive decline in the actual number of Black teachers—the loss of more than 3 in every 5. Virtually all of this change occurred after the city was devastated by Hurricane Katrina in 2005. The racial and ethnic composition of newly hired teachers contributed to the decline in Black representation among New Orleans teachers, while leaving patterns served to mitigate it. Overall, the teacher workforce in New Orleans underwent a drastic shift between 2002 and 2012, during which time the historically high proportion of Black teachers decreased by half, and that of White teachers nearly doubled.

NEW ORLEANS DATASET		
	District	**Charter**
Type of data	Teacher level	Teacher level
Years available	2002–2012	2002–2012
Linked b/w years	Yes	Yes
Multiracial category	2010–2012	2010–2012
Total sample size	19,589	13,710

2. SNAPSHOT OF TEACHER AND STUDENT RACE AND ETHNICITY IN NEW ORLEANS PUBLIC SCHOOLS

Prior to discussing any results for New Orleans, there are four important issues that must be addressed briefly. First, given the rapidly evolving organizational structure during the years of our data, we will be presenting citywide results in this profile rather than disaggregating by sector (see the first footnote below). As a rule of thumb, one can consider citywide results prior to Katrina (2005) as applying almost entirely to district schools in the "traditional sense" of the term (non-charter schools run by the Orleans Parish School Board); the results between 2007 and 2012 apply predominantly to charter schools and/or non-charter schools run by Louisiana's Recovery School District.

Second, due to very low sample sizes among Hispanic teachers, our discussion of New Orleans results will focus mostly on Black and White teachers, and Hispanic teachers are not included in some of the figures below.[2] Third, we were unable to obtain any data for the small group of "non-network" charter schools (about 7-10 in any given year post-Katrina) that are overseen by the Orleans Parish School Board.[3] Fourth and finally, our dataset for Orleans Parish Public Schools contains no observations in 2008. We estimate that this eliminates about 200 teachers from the workforce in that year. This is unlikely to have had a drastic impact on the citywide results, but it bears keeping in mind.

Moving on to Figure NOLA-1, in 2012 (our most recent year of data), roughly 9 in 10 New Orleans students were Black or Hispanic (primarily the former), compared with only around 55 percent of teachers citywide.
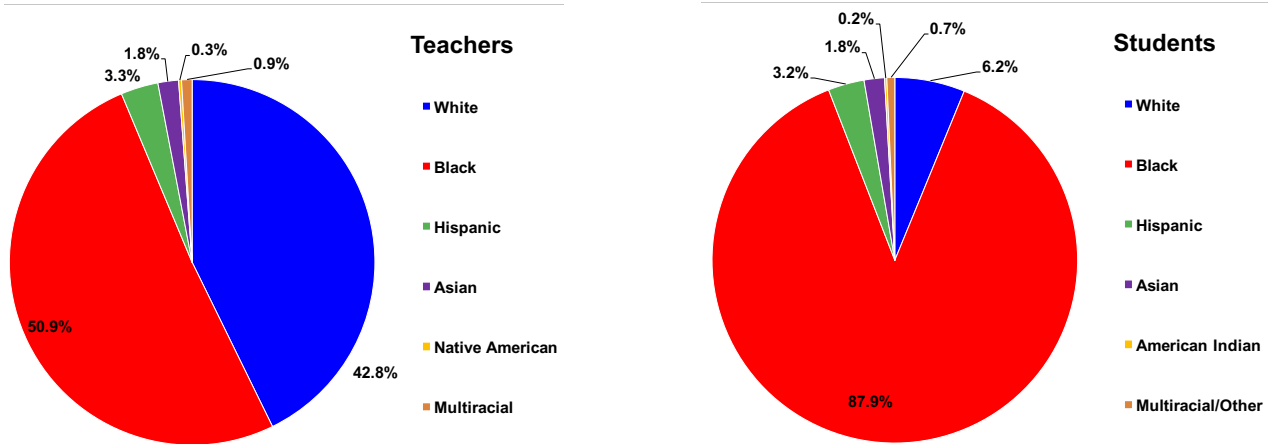
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1   Prior to Hurricane Katrina, New Orleans consisted almost entirely of district schools run by the Orleans Parish School Board (OPSB). Immediately after Katrina, a number of OPSB schools did reopen as non-charters, but most were taken over by the state's Recovery School District (RSD) within a year. Between 2008 and 2012, only a small handful of regular public schools were overseen by OPSB (which also oversees a number of charter schools). Instead, state entities, mostly RSD, assumed control of most of the city's schools, most of which were eventually converted to charter schools (there was still a significant number of non-charter schools in the city at the end of our dataset (2012), but these were largely RSD "direct-run" schools). Due to these rapid shifts in the structure of the city's public schools, in addition to the fact that we cannot link teachers between state and OPSB schools, we think it is most useful to focus this profile on city-level results. See the Data Appendix for more information.

2   The number of Hispanic teachers citywide ranges from around 50 to no more than 90. Results for all races and ethnicities are presented in Table NOLA-A.

3   In 2011-12, the most recent year of our dataset, these schools were Audubon, Easton, Einstein, Encore, Franklin HS, Hynes, Lake Forest, Lusher, Moton and Sci High (note that several of these are selective schools). To the degree race and ethnicity distributions and patterns vary between these schools and those for which we do have data, this may influence our results somewhat.

Teachers

- White — 42.8%
- Black — 50.9%
- Hispanic — 3.3%
- Asian — 1.8%
- Native American — 0.3%
- Multiracial — 0.9%

Students

- White — 6.2%
- Black — 87.9%
- Hispanic — 3.2%
- Asian — 1.8%
- American Indian — 0.2%
- Multiracial/Other — 0.7%

In contrast, nearly 43 percent of teachers working in New Orleans schools were White, compared with only about 6 percent of students.

3. TRENDS IN THE NEW ORLEANS PUBLIC SCHOOL STUDENT BODY AND TEACHING FORCE

As shown in Figure NOLA-2, prior to Hurricane Katrina, the teacher workforce in New Orleans was predominantly Black (about 74 percent), with a smaller but significant share of White teachers (roughly 25 percent). There is evidence that Black representation among New Orleans teachers was declining slightly prior to Katrina (2002-04 in Figure NOLA-2), but we cannot say how long this had been happening or if it would have continued without Katrina.

In any case, in 2007, the number of teachers working in New Orleans schools was roughly half of what it was prior to the storm. These numbers grew steadily between 2007 and 2012, but never approached pre-Katrina levels (even considering the fact that we are missing data from a handful of schools). During this period, the Black share of the (smaller) teacher workforce declined from 66 to roughly 51 percent, largely due to the wrongful termination of thousands of pre-Katrina teachers, a large percentage of whom were Black.[4] In all, the share of Black teachers in the workforce declined by about 25 percentage points from 2002 levels.[5]

FIGURE NOLA-2: TEACHER RACE AND ETHNICITY DISTRIBUTION, 2002–2012

Citywide
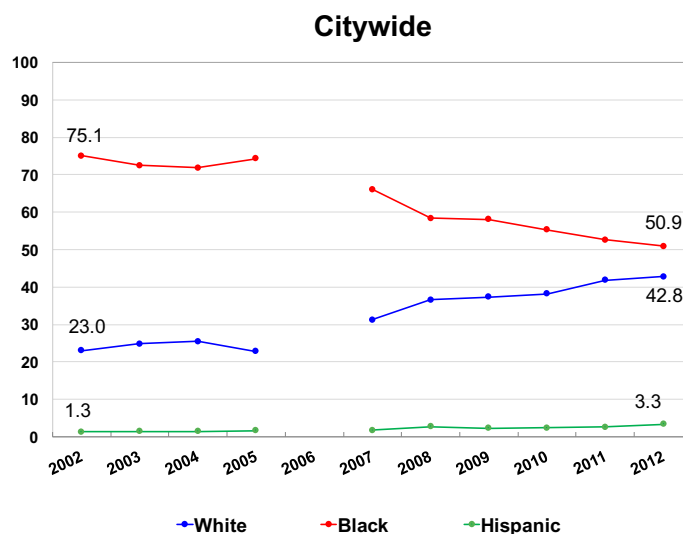
4   See Eddy Oliver, Oscarlene Nixon, Mildred Goodwin, et al. v. Orleans Parish School Board, et al.

5   In comparing the race and ethnicity distributions over time, note that teachers can be coded as "multiracial" in the final three years of our data, but not before (see Table NOLA-A). The citywide proportion of "multiracial" charter teachers in these years, however, is negligible (no more than 1 percent).

Figure NOLA-3 presents another way to visualize these data. Here, we see changes within each racial and ethnic category over time.

FIGURE NOLA-3: TEACHER POPULATION CHANGES BY RACE AND ETHNICITY, 2002–2012
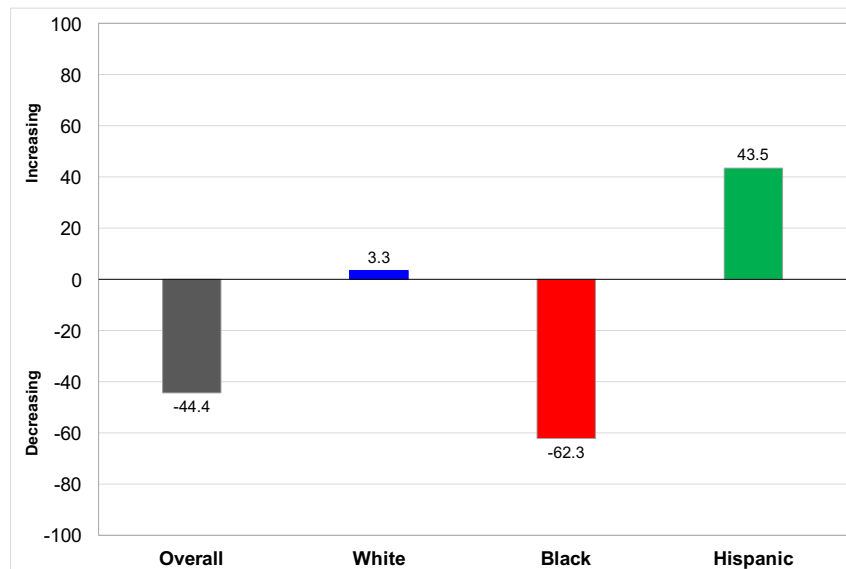
Differences in group sizes for the various racial and ethnic categories can mean that relatively modest changes in one group's proportional share can actually represent a fairly large shift within that category. For example, while the share of Black teachers in the district declined by about 25 percentage points from 2002 to 2012, the actual number of Black teachers actually declined by an astonishing 62 percent. Similarly, the nearly 20-point increase in the share of all teachers who were White represented a modest 3 percent increase in the total number of White teachers. Meanwhile, the tiny number of Hispanic teachers rose by almost 44 percent but still comprised only a small share of the workforce.

Figure NOLA-4 illustrates the trends in the "representation gaps" between Black students and teachers (the proportion of students minus that of teachers, in percentage points). This gap is approximately twice the size in 2012 that it was in 2002. This is due mostly to the decline in the Black share of the teacher workforce.

FIGURE NOLA-4: STUDENT-TEACHER REPRESENTATION GAP, BY RACE AND ETHNICITY, 2002–2012
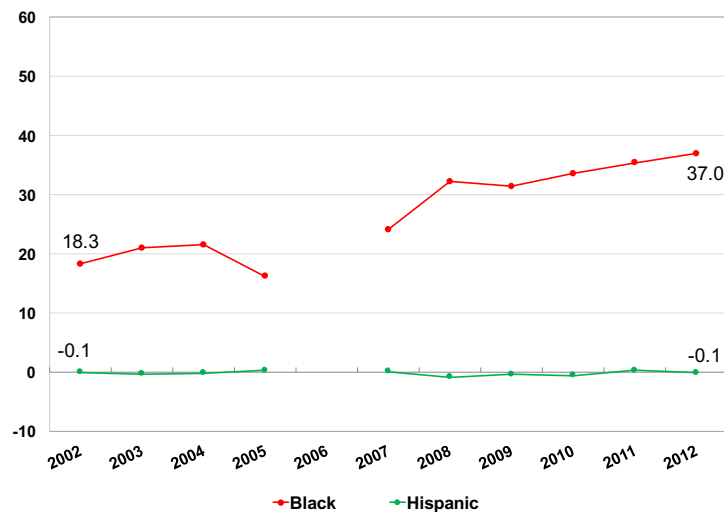
The fact that teaching is a female-dominated occupation means that minority men usually constitute a minuscule proportion of the total teacher workforce. In New Orleans, this is particularly salient for Black males (Figure NOLA-5), which means that Black boys are particularly affected by the disparity in characteristics between teachers and students.
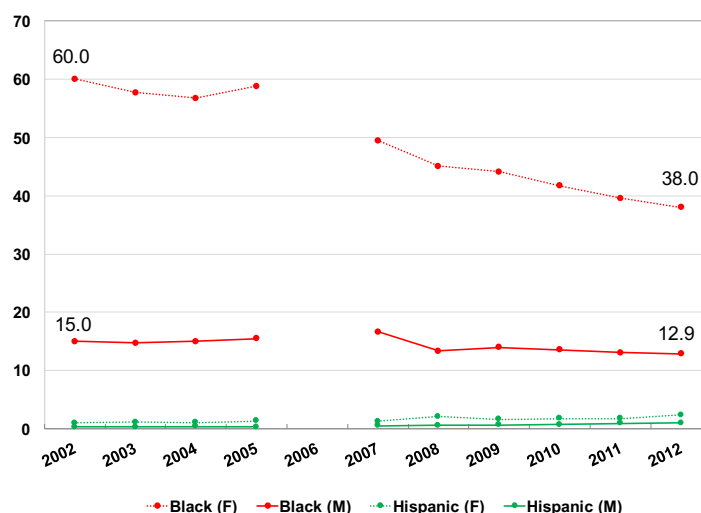
As would be expected from the sharp decline in the overall Black teaching force, the numbers for Black men and women (as a share of the total workforce) both declined between 2002 and 2012, though the drop was considerably steeper among women. Among Hispanics, in contrast, representation increased slightly among both men and women, although both proportions remained extremely low.

4. ARE NEW HIRES CONTRIBUTING TO TEACHER DIVERSITY IN NEW ORLEANS PUBLIC SCHOOLS?

Given the shifts in the structure of New Orleans public schools, we must interpret our hiring and leaving results with particular caution. That said, in New Orleans, prior to Katrina (i.e., in 2003 and 2004), the proportion of school teachers each year who were new hires (or, more accurately, teachers who were new to the city in our dataset—see "About the City Profiles") was roughly 10-15 percent, on average. Predictably, after Katrina, this rate increased considerably. Around three-quarters of the new hires we identified in our dataset were hired during this latter period (post-storm), the vast majority of whom were placed in state-run and charter schools.

Figure NOLA-6 compares the proportion of new teachers each year, by race and ethnicity (Hispanics excluded), with the overall proportions of the city's teaching force, also by race and ethnicity, in the previous year. Even before Katrina, White teachers were heavily overrepresented among new hires, relative to the share of White teachers overall in the previous year, while Black teachers were heavily underrepresented.[6]

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6   In most of the cities in this study, we identify newly hired teachers as those who "appear" in our datasets for the first time, which means that we might be identifying some teachers as new even if they had previously taught in the city—i.e., if they had switched between charter and district schools (since the unique teacher identifier in our datasets differs between sectors). Moreover, the same goes for "leavers"; we identify leavers as teachers who "leave" our dataset and do not return, but this would not count those who switch sectors (who would, of course, also be identified erroneously as new hires in their new sectors). All of this is also the case in New Orleans, although the definition of "sector" is slightly different; the unique teacher identifiers in our datasets differ between OPSB and state-authorized schools (RSD and Board of Elementary and Secondary Education). This means that any teachers in OPSB schools pre-Katrina who returned to their schools after they were taken over by state entities might be identified as new hires. In order to address this, at least partially, we exclude 2007 from our identification of new teachers (in addition to 2005 and 2006, due to the storm itself), and we exclude 2004 from our identification of "leavers" (as well as 2005 and 2006). We are still, however, identifying some teachers as new who were in OPSB schools prior to the hurricane (and/or leavers who switched sectors). See the Data Appendix for additional details.
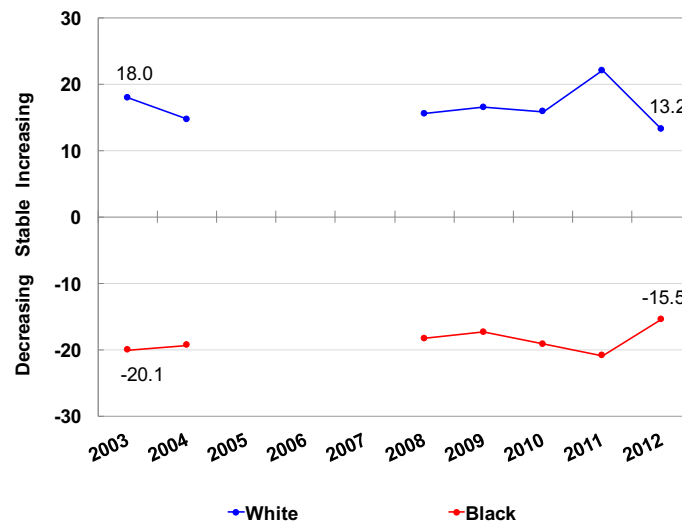
The results in Figure NOLA-6 indicate that, post-Katrina, the proportion of teachers new to the city who were White continued to be considerably higher than the proportion of White teachers overall in the previous year. Meanwhile, the proportion of new teachers who were Black was consistently lower that the proportion of Black teachers in the teaching force the previous year, as Black representation among new hires continued to decline after the storm (see Table NOLA-A).

5. ARE SECTOR LEAVING PATTERNS SERVING TO DIVERSIFY NEW ORLEANS PUBLIC SCHOOL TEACHERS?

In New Orleans, teacher leaver rates (or, more accurately, "sector leaver rates"—see "About the City Profiles") were, across all years, around 20 percent annually, and this rate increased considerably after Katrina. Every year, schools must draw deeply into the pool of available candidates to fill these vacancies, which, depending on the supply of qualified replacements, may hinder efforts to improve teacher diversity. To the extent that teacher leaver rates are higher among underrepresented groups (in this case, Blacks and Hispanics), the challenge is likely to be greater.

FIGURE NOLA-7: SECTOR LEAVER RATES, BY RACE AND ETHNICITY, 2002–2003 and 2007–2010
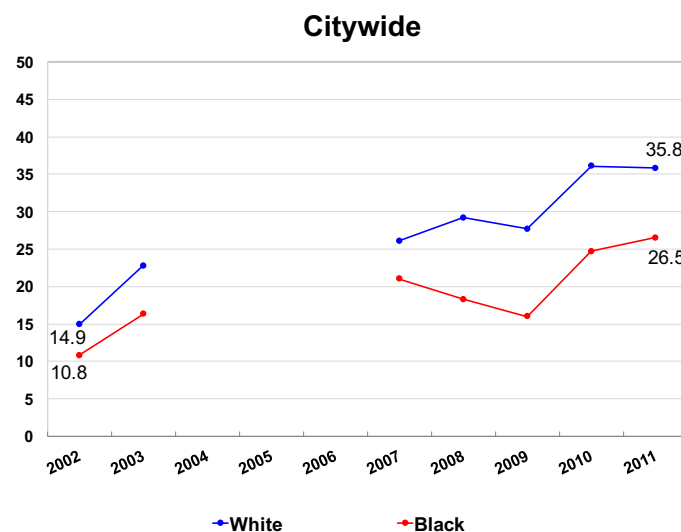

Table notes: The year in this table refers to the year before teachers left—e.g., the leaver rates for 2007 indicate teachers who were employed in 2007-08 and left before 2008-09.

Before and after Katrina, leaver rates were consistently higher among White teachers compared with their Black colleagues (Figure NOLA-7). Moreover, the gap, while meaningful in magnitude before and after Katrina, was actually higher post-Katrina.

Given the "interruption" in the data, we cannot produce cumulative leaver rates for any cohorts of new teachers hired prior to Katrina and can only produce rates for four cohorts of new teachers after the storm, and only for state-run schools (as the OPSB samples are quite small after 2005). As a consequence, there is no Figure 8 table of cumulative leaver rates for this city profile.

6. WHICH STUDENTS ARE SERVED BY THE SCHOOLS IN WHICH BLACK AND HISPANIC TEACHERS WORK?

Figure NOLA-9 presents the average rate of students' eligibility for free and reduced-price lunch (FRL), a rough proxy for low-income status, and the average percentage of Black and Hispanic students served by the schools where teachers of different races and ethnicities work. Please note that these are teacher averages, not city averages.[7]

FIGURE NOLA-9: AVERAGE STUDENT FRL RATE AND AVERAGE PERCENT OF MINORITY STUDENTS, BY TEACHER RACE AND ETHNICITY (POOLED, 2002–2012)
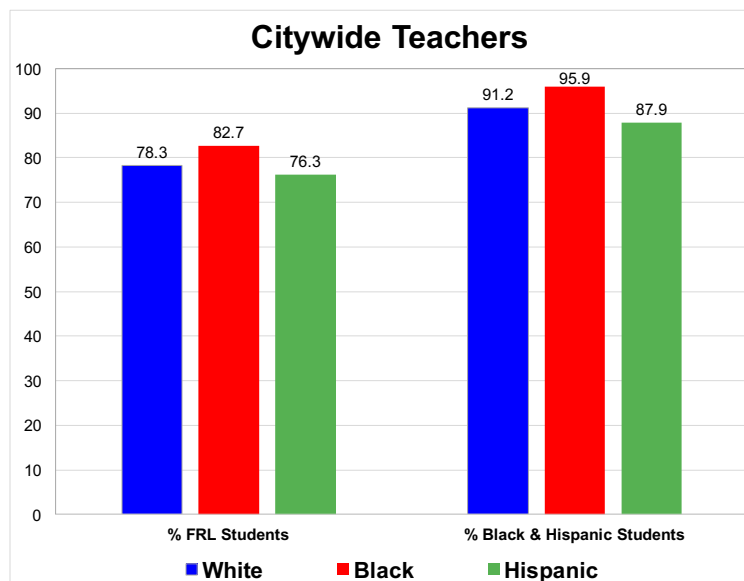
Footnote to figure: School-level data from 2005 are excluded from this figure, due to a very low match rate.

The typical New Orleans public school teacher worked in a school in which 9 in 10 students were Black or Hispanic (largely the former), and 4 in 5 students were eligible for subsidized lunch assistance. Both averages were roughly 4-5 percentage points higher for the typical Black teacher than the typical White teacher, with average rates for the few Hispanic teachers lower still.

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7   We were only able to match about 15 percent of our observations to school-level data in 2005. This year is therefore excluded from Figure NOLA-8.

NEW ORLEANS CITYWIDE

Measure		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Pooled
Teacher race and ethnicity distribution[1]	White	23.0	24.8	25.4	22.7	29.2	31.2	36.6	37.3	38.2	41.9	42.8	**30.3**
	Black	75.1	72.5	71.8	74.3	67.6	66.1	58.4	58.1	55.2	52.6	50.9	**65.9**
	Hispanic	1.3	1.4	1.4	1.6	2.6	1.8	2.7	2.2	2.4	2.6	3.3	**1.9**
	Asian	0.7	1.3	1.3	1.3	0.6	0.9	2.2	2.2	2.3	2.0	1.8	**1.5**
	American Indian	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.2	1.3	0.2	0.3	**0.2**
	Multiracial	◆	◆	◆	◆	◆	◆	◆	◆	0.6	0.7	0.9	**0.2**
Teacher sample	Total observations	4,846	4,919	4,573	3,611	911	2,220	2,189	2,414	2,497	2,584	2,699	**33,463**
	Total valid observations	4,846	4,919	4,573	3,611	911	2,220	2,184	2,288	2,489	2,566	2,692	**33,299**
Student ethnicity distribution	White	3.6	3.5	3.5	5.1	6.2	5.5	5.3	5.4	6.2	6.1	6.2	**4.8**
	Black	93.3	93.4	93.3	90.5	88.9	90.2	90.6	89.5	88.8	88.0	87.9	**90.9**
	Hispanic	1.2	1.1	1.2	1.9	1.9	1.8	1.8	1.8	1.8	2.9	3.2	**1.8**
	Asian	1.9	1.9	1.9	2.3	2.9	2.4	2.2	2.2	2.0	1.9	1.8	**2.0**
	American Indian	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.2	**0.1**
	Multiracial/Other	◆	◆	◆	◆	◆	◆	◆	◆	0.4	0.6	0.7	**0.2**
	Total enrollment	70,457	68,214	65,555	6,321	25,177	31,235	34,561	36,927	39,421	41,903	47,709	
"New" teacher race and ethnicity distribution	White	◆	40.9	39.4	§	§	§	46.7	53.1	53.1	60.2	55.0	**50.2**
	Black	◆	55.0	53.1	§	§	§	47.7	41.1	38.9	34.3	37.2	**43.5**
	Hispanic	◆	1.0	2.6	§	§	§	3.0	2.8	4.1	2.6	4.7	**3.0**
	Asian	◆	2.8	4.7	§	§	§	2.3	2.8	2.6	1.9	2.4	**2.7**
	American Indian	◆	0.3	0.2	§	§	§	0.3	0.4	0.8	0.1	0.3	**0.3**
	Multiracial	◆	◆	◆	§	§	§	◆	◆	0.5	0.8	0.5	**0.3**
	Overall percent new[2]	◆	14.1	11.9	§	§	§	32.1	22.2	26.3	28.4	28.5	**21.2**
Sector leaver rates[3]	White	14.9	22.8	§	§	§	26.1	29.2	27.7	36.1	35.8	◆	**27.2**
	Black	10.8	16.3	§	§	§	21.0	18.3	16.0	24.7	26.5	◆	**17.3**
	Hispanic	18.2	25.0	§	§	§	33.3	24.1	29.4	26.7	31.3	◆	**26.6**
	Asian	21.2	18.6	§	§	§	31.6	25.5	30.0	31.0	44.2	◆	**29.5**
	American Indian	0.0	0.0	§	§	§	0.0	25.0	20.0	16.1	16.7	◆	**16.3**
	Multiracial	◆	◆	§	§	§	◆	◆	◆	33.3	23.5	◆	**28.1**
	Overall leaver rate[2]	11.9	18.0	§	§	§	23.0	22.6	21.0	29.2	30.8	◆	**20.7**
Average school free/reduced price lunch rate	White	69.1	66.9	67.9	§	74.5	79.3	85.8	85.2	86.7	85.9	86.3	**78.3**
	Black	81.3	78.4	79.2	§	71.4	82.3	89.3	86.9	88.9	88.8	88.8	**82.7**
	Hispanic	75.9	76.5	71.0	§	67.3	72.1	79.7	78.3	80.6	77.5	78.1	**76.3**
	Asian	80.6	81.0	75.8	§	81.8	75.1	81.9	87.2	86.5	86.4	84.8	**82.6**
	American Indian	-	51.6	67.9	§	-	84.7	79.9	91.7	97.1	77.3	76.1	**88.2**
	Multiracial	◆	◆	◆	§	◆	◆	◆	◆	86.9	89.3	87.7	**88.0**
Average school percent Black/Hispanic students	White	86.2	87.4	87.1	§	91.3	94.3	95.4	95.4	94.8	92.8	91.4	**91.2**
	Black	95.1	95.3	94.8	§	96.7	96.8	97.2	96.9	96.5	97.0	96.3	**95.9**
	Hispanic	90.5	89.3	87.1	§	84.6	89.2	89.9	87.7	88.9	86.2	85.0	**87.9**
	Asian	91.8	93.9	88.4	§	96.1	92.1	94.4	94.2	95.0	94.2	92.4	**93.0**
	American Indian	-	75.2	83.3	§	-	99.7	92.2	98.5	97.0	80.0	76.5	**91.9**
	Multiracial	◆	◆	◆	§	◆	◆	◆	◆	93.7	97.2	93.6	**94.8**
School data match rates	Free/reduced price lunch	87.8	93.4	93.4	§	96.3	96.2	98.4	96.0	94.5	91.2	87.4	**92.9**
	Race and ethnicity	87.8	93.4	93.4	§	96.3	96.2	98.4	96.0	94.5	91.2	87.4	**92.9**

◆ Estimates not applicable for this category or year
§ Results suppressed due to Hurricane Katrina and/or missing OPSB data for 2008
[1] Data for "non-network" charters overseen by OPSB missing in all years; OPSB data missing in 2008. All estimates include charter and district schools.
[2] Estimates include observations with missing values on race and ethnicity question. 2005 estimates should be interpreted with caution.
[3] Rates represent the proportion of teachers in a given year who did not appear in their sector's dataset in all subsequent years.
General notes: Some of the estimates in this table may apply to very small samples of observations, such as those for certain race and ethnicity categories (e.g., American Indians); interpret with caution. Information on data sources, samples, and other issues in the Data Appendix. Details on all measures, including the identification of new hires and sector leavers, can be found in About the City Profiles. Information specific to the New Orleans results can be found in the New Orleans city profile. Relative frequencies may not add up to 100 due to rounding error.

Teacher and Student Diversity in New York Public Schools

1. SUMMARY OF FINDINGS

In 2012, White teachers in New York City public schools[1] outnumbered their Black and Hispanic colleagues by roughly a 3-1 ratio; the situation was reversed among public school students, where Blacks and Hispanics outnumbered Whites by a 5-1 ratio. Between 2002 and 2012, the share of White and Hispanic teachers in district schools remained stable, while the proportion of Black teachers declined modestly. Translated into numbers, Black teachers experienced a significant loss in population. During this period of time, the net impact of hiring patterns was to reduce diversity in the teacher force. In contrast, sector leaver rates were modestly higher for White teachers compared with Black and Hispanic educators, which increased diversity. Overall, then, there were partially offsetting patterns in hiring and leaver rates between 2002 and 2012.

NEW YORK DATASET		
	District	**Charter**
Type of data	Teacher level	Sector level
Years available	2002–2012	2010–2012
Linked b/w years	Yes	No
Multiracial category	No	Yes
Total sample size	836,557	8,917

2. SNAPSHOT OF TEACHER AND STUDENT RACE AND ETHNICITY IN NEW YORK CITY PUBLIC SCHOOLS

In 2012, our most recent year of data, nearly 85 percent of students attending New York City public schools, pooled across district and charter sectors, were minorities: 15 percent Asian, 30 percent Black and 40 percent Hispanic. In contrast, only 40 percent of the city's teachers were minorities (Figure NYC-1).

FIGURE NYC-1: SNAPSHOT OF STUDENT AND TEACHER RACE AND ETHNICITY, 2012
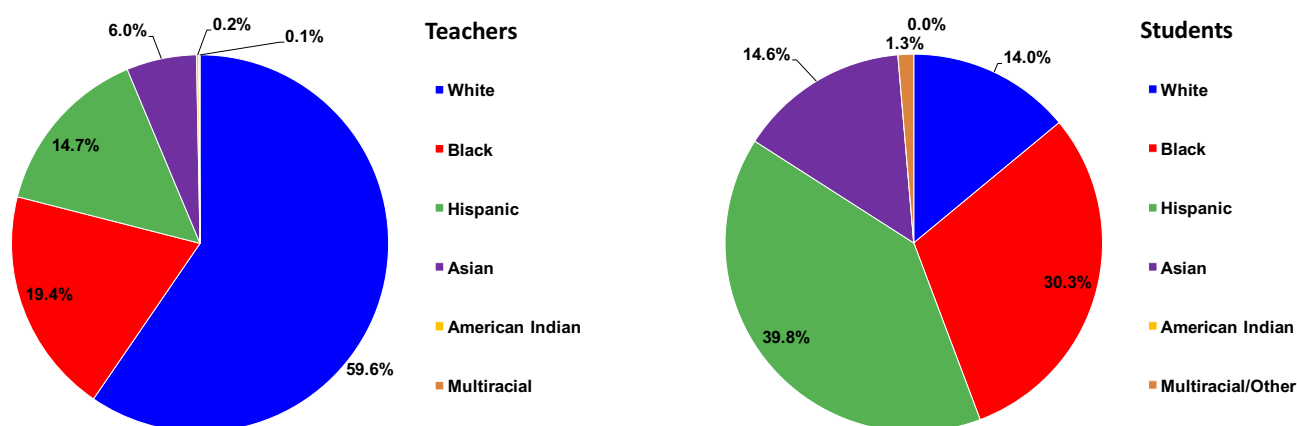
FOOTNOTE TO FIGURE: The "Multiracial" response was not available to teachers in district schools in 2012, but it was available to charters and thus is retained in the figure above.

The lack of parity between Black students and Black teachers was much more pronounced in New York City's

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1   In the teacher-level dataset that we received for New York City charters, nearly half of all observations had missing or non-valid race and ethnicity values. As our alternative, we were only able to obtain sector-level New York City charter teacher data for three years (2010-12). This means that we can only include New York City charters in Figures NYC-1, NYC-2 and NYC-4. See the Data Appendix for more details on our requests and the responses we received. There is also an apparent coding error in the charter data that we were able to obtain, by which Asian teachers seem to be coded as White in 2010 and 2011. Given the small proportional representation of Asian teachers in the city's charter schools in 2012, it is unlikely that this error influences the results in Figure NYC-2.

charter schools, whereas the gaps for Hispanic teachers and students were large and similar in both sectors. Asian teachers were overrepresented vis-à-vis a small number of Asian students in the charter sector, and underrepresented vis-à-vis a substantial Asian student population in the district sector. (See Tables NYC-A and NYC-B).[2]

3. TRENDS IN THE NEW YORK CITY PUBLIC SCHOOL STUDENT BODY AND TEACHING FORCE

As Figure NYC-2 illustrates, from 2002 to 2012, the proportion of the teaching force in New York City district schools that was White and Hispanic remained relatively stable, while the proportion that was Black decreased modestly (approximately 3 percentage points), mostly during the first three years of our data. Meanwhile, the representation of Asian teachers in district schools increased by 2 percentage points (see Table NYC-B). Finally, it is difficult to discuss trends in charter schools since, despite extensive efforts, we were only able to obtain data for three years, and only at the sector level (2010-12).

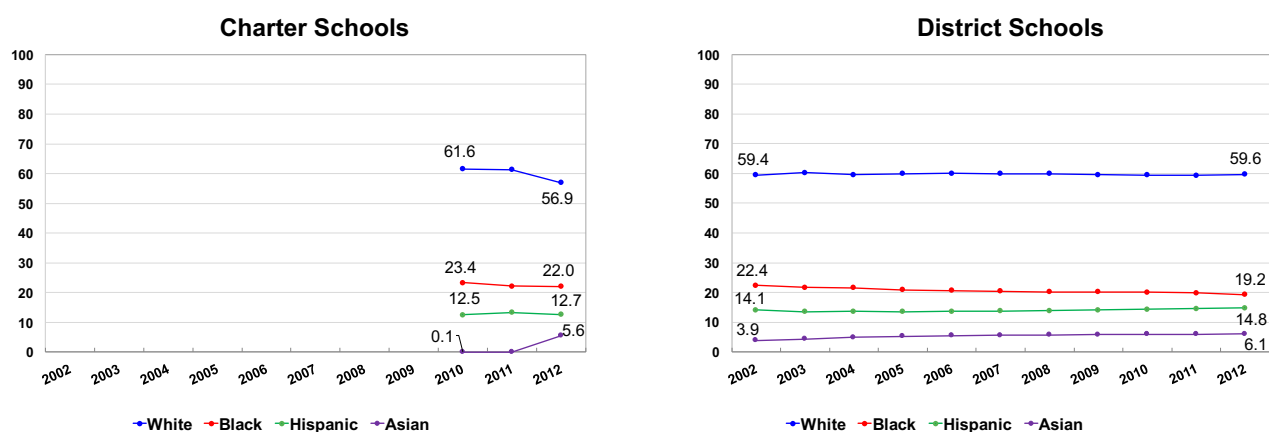**FIGURE NYC-2:** TEACHER RACE AND ETHNICITY DISTRIBUTION, BY SECTOR, 2002–2012

Figure NYC-3, which includes teachers in both the charter and district sectors, presents another way to visualize these data. Here, we see changes within each racial and ethnic category over time.

FIGURE NYC-3: TEACHER POPULATION CHANGES BY RACE AND ETHNICITY, 2002–2012
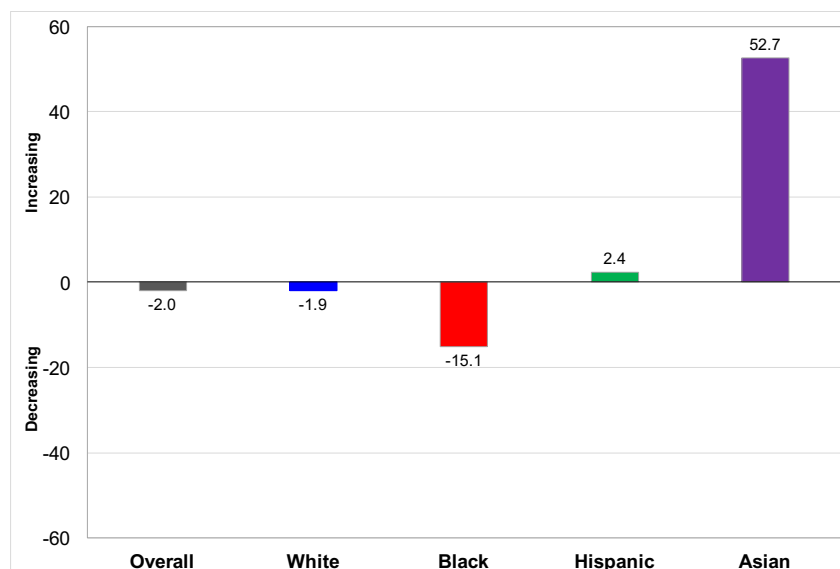
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2   When interpreting levels or trends in race and ethnicity distributions in this profile, particularly when comparing estimates between sectors, note that the "Multiracial" category was used for charter school teachers in all years (2010–12) but not for district school teachers in any years (see Tables NYC-A and NYC-B).

As Figure NYC-3 shows, differences in group sizes for the various racial and ethnic categories can mean that relatively modest changes in one group's proportional share can actually represent a fairly large shift within that category. For example, the small number of Asian teachers meant that, even as their share of the total teaching force grew by 2 percentage points, their numbers actually grew by nearly 53 percent. The proportion of White and Hispanic teachers in the district, which remained fairly stable, represented a modest 2 percent decline in numbers for both groups. Meanwhile, the 3-point decrease in the share of all teachers who were Black represented a 15 percent decline in the total number of Black teachers.

Figure NYC-4 illustrates the trends in the "representation gaps" between minority students and teachers (the proportion of students minus that of teachers, in percentage points), by sector. In New York City district schools, the gap between Black students and teachers diminished very slightly over time, due to a modest decrease in the Black share of the student population. The gaps between Hispanic students and teachers and Asian students and teachers both increased very slightly. The gaps appear a bit more volatile in charter schools, but, again, the short duration of our data and the small charter samples make it difficult to determine whether these trends are transitory or persistent. Of note, however, is that the gap between Black students and teachers was approximately four times larger than in the district sector.

FIGURE NYC-4: STUDENT-TEACHER REPRESENTATION GAP, BY RACE AND ETHNICITY AND SECTOR, 2002–2012
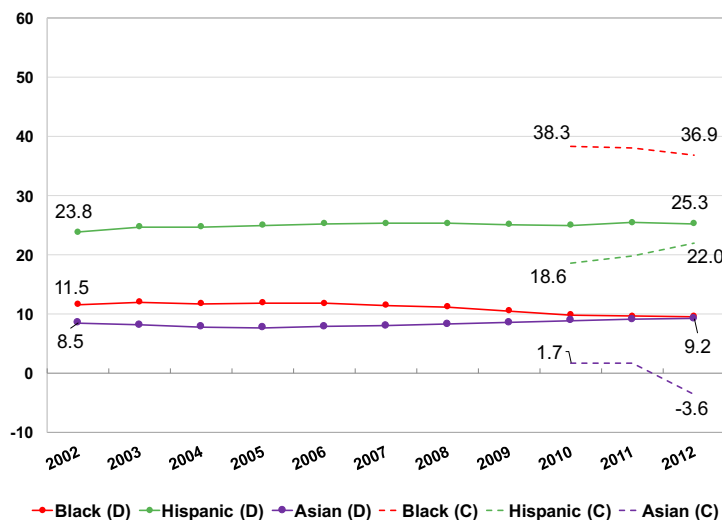
The fact that teaching is a female-dominated occupation means that Asian, Black and Hispanic men constitute only miniscule proportions of the total teacher workforce in New York City (Figure NYC-5), resulting in a demographic mismatch that is particularly acute for Asian, Black and Hispanic boys.
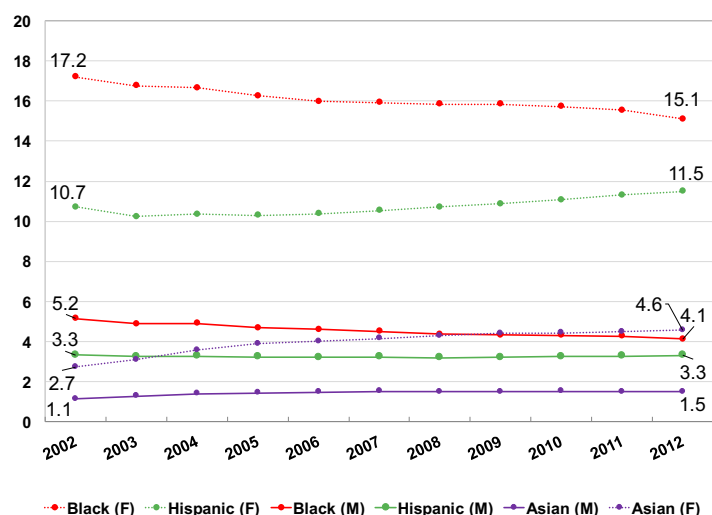
Looking at trends over time, the shares of male and female Asian and Hispanic teachers remained stable or
increased slightly, while the shares of male and female Black teachers both declined slightly.

4. ARE NEW HIRES CONTRIBUTING TO TEACHER DIVERSITY IN NEW YORK CITY PUBLIC SCHOOLS?

In New York City, between 2002 and 2012, the proportion of district teachers in our dataset who were new hires
each year (or, more accurately, teachers who were new to the sector—see "About the City Profiles") was roughly
8-9 percent, on average. As is the case elsewhere, these rates tended to be a bit higher in the earlier years of our
data than in the later years, most likely due to recession-related budget cuts.

Figure NYC-6 compares the proportion of teachers new to the district sector each year, by race and ethnicity,
with the overall proportion of the teaching force in that sector the previous year, also by race and ethnicity. Un-
fortunately, as mentioned earlier, we were not able to procure the data necessary to carry out this comparison,
nor any subsequent analyses in this profile, for New York City charter schools.

FIGURE NYC-6: PERCENT OF NEW HIRES COMPARED WITH PERCENT OF ALL TEACHERS IN PREVIOUS YEAR, BY
RACE AND ETHNICITY, 2003–2012
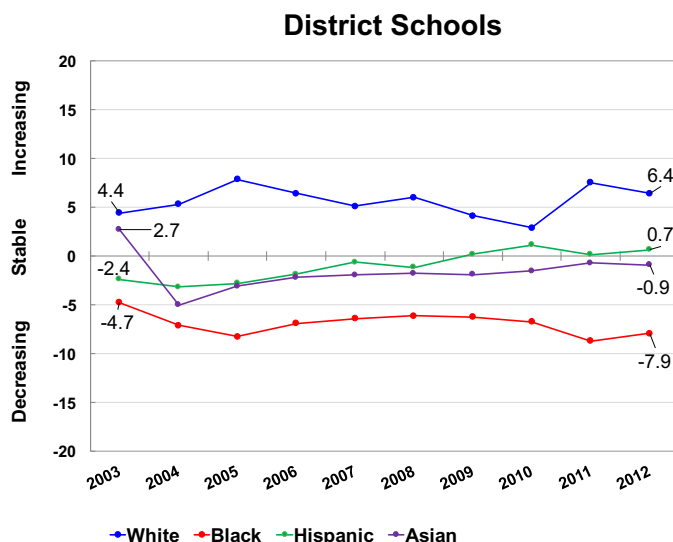
The proportion of Black new hires in district schools was consistently below (by 5-8 percentage points every year) the proportion of Black teachers in the district workforce the previous year. Asians and Hispanics were also underrepresented among new hires, but only modestly. By contrast, the share of new White teachers was consistently higher (in most years, by more than 5 percentage points) than in the previous year's teaching force.

5. ARE SECTOR LEAVING PATTERNS SERVING TO DIVERSIFY NEW YORK CITY'S PUBLIC SCHOOL TEACHERS?

Teacher "leaver rates" (or, more accurately, "sector leaver rates"—see "About the City Profiles") in New York City district schools declined over the course of our study. Even so, between 2011 and 2012, more than 8 percent of the city's teachers in our dataset left the district. (Note that the rates in a given year express the proportion of that year's Black, White, Asian and Hispanic teachers who were not in the district in any subsequent year.) Every year, schools must draw deeply into the pool of available candidates to fill these vacancies, which, depending on the supply of qualified replacements, may hinder efforts to improve teacher diversity. To the extent that teacher leaver rates are higher among underrepresented groups (in this case, Asians, Blacks and Hispanics), the challenge is likely to be greater.

Leaver rates were generally higher among White teachers, compared with those among their Asian, Black and Hispanic colleagues, but the differences were extremely small, particularly after 2009 (Figure NYC-7).

FIGURE NYC-7: SECTOR LEAVER RATES, BY RACE AND ETHNICITY, 2002–2011
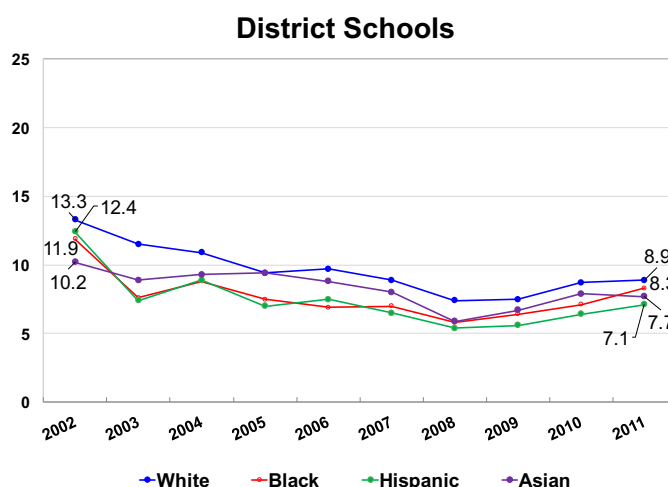
Figure notes: The year in this figure refers to the year before teachers left—e.g., the leaver rates for 2005 indicate teachers who were employed in 2005-06 and left before 2006-07.

In Figure NYC-8, we present cumulative new-teacher leaver rates for the district sector, by race and ethnicity. Note that, for ease of presentation, these rates are not disaggregated by cohort, which means that the bottom-most row of the table includes cumulative outcomes for one new-teacher cohort (the earliest one we can identify in our dataset), the second from the bottom includes the first two new-teacher cohorts, the third up includes the first three, and so on.

District Sector, 2002-2012			
Percent of new teachers who leave	**White**	**Black**	**Hispanic**
Within 1 year	11.2	9.5	9.8
Within 2 years	22.6	17.8	17.8
Within 3 years	30.4	24.8	24.1
Within 4 years	35.4	29.6	28.7
Within 5 years	39.0	33.6	31.2
Within 6 years	41.3	35.9	33.4
Within 7 years	42.9	37.6	34.9
Within 8 years	44.0	38.8	35.8
Within 9 years	44.8	39.8	36.6

As was the case with overall teacher leaver rates, the cumulative leaver rates of new teachers in district schools were consistently higher for White teachers than for Asian, Black and Hispanic teachers. For example, after three years, 30 percent of new White teachers left the district, versus approximately 25 percent of Black and Hispanic hires.

6. WHICH STUDENTS ARE SERVED BY THE SCHOOLS IN WHICH BLACK AND HISPANIC TEACHERS WORK?

Figure NYC-9 presents the average rate of students' eligibility for free and reduced-price lunch (FRL), a rough proxy for low-income status, and the average percentage of Asian, Black and Hispanic students served by the schools where teachers of different races and ethnicities work. Please note that these are teacher averages, not sector averages.

FIGURE NYC-9: AVERAGE STUDENT FRL RATE AND AVERAGE PERCENT OF MINORITY STUDENTS, BY TEACHER RACE AND ETHNICITY, POOLED (2002–2011)
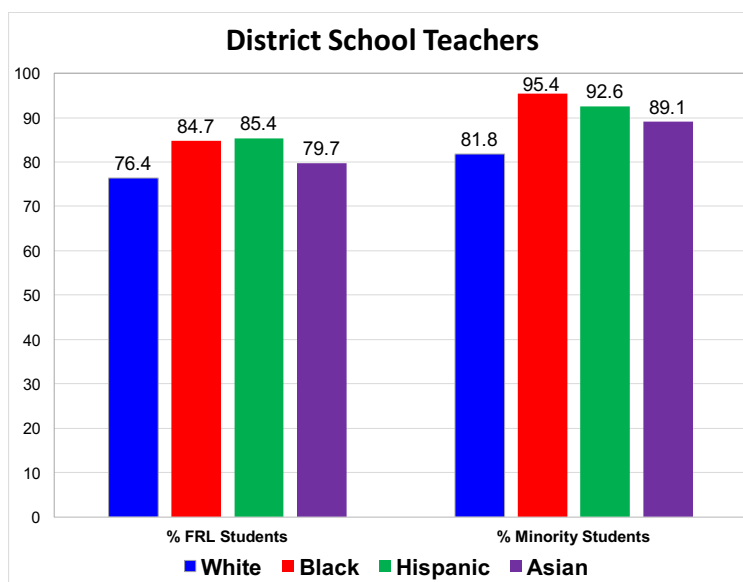
The typical New York City teacher, regardless of race or ethnicity, worked in a school where 80 percent or more of students were eligible for subsidized lunch and an even greater share of students were minority. Black and Hispanic teachers tended to work in schools with FRL rates that were, on average, 9 percentage points higher than the schools where their White colleagues tended to work and 5 percentage points higher than the schools where their Asian colleagues worked.

There were also differences among teachers in regard to the race and ethnicity of students served. The typical White teacher worked in a school with a student population that was about 82 percent minority, which was 7 points lower than the typical Asian teacher, 11 points lower than the typical Hispanic teacher and more than 13 points lower than the typical Black teacher.

These differences were even more dramatic in schools with large concentrations of Black and Hispanic students (not shown in Figure NYC-9). Specifically, the typical White teacher worked in a school serving about 66 percent Black and Hispanic students, which was about 7 points lower than the typical Asian teacher, 18 points lower than the typical Hispanic teacher and 24 points lower than the typical Black teacher.

Table NYC-A	NEW YORK CITY CHARTER SECTOR				
Measure		**2010**	**2011**	**2012**	**Pooled**
Teacher race and ethnicity distribution	White[1]	61.6	61.3	56.9	**60.0**
	Black	23.4	22.2	22.0	**22.5**
	Hispanic	12.5	13.4	12.7	**12.9**
	Asian[1]	0.1	0.1	5.6	**1.9**
	American Indian	0.1	0.2	0.1	**0.1**
	Multiracial	2.3	2.8	2.7	**2.6**
Teacher sample	Total observations	2,196	2,906	3,815	**8,917**
	Total valid observations	2,196	2,906	3,815	**8,917**
Student ethnicity distribution	White	3.0	3.3	3.3	**3.2**
	Black	61.7	60.3	58.9	**60.3**
	Hispanic	31.1	33.2	34.7	**33.0**
	Asian	1.8	1.8	2.0	**1.9**
	Multiracial/Other	2.3	1.4	1.0	**1.6**
	Total enrollment	39,119	48,057	57,663	

[1] 2009 and 2010 estimates are likely incorrect. See Data Appendix for details.
General notes: Information on data sources, samples, and other issues in the Data Appendix. Relative frequencies may not add up to 100 due to rounding error.

Table NYC-B		**NEW YORK CITY DISTRICT SECTOR**											
Measure		**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**Pooled**
Teacher race and ethnicity distribution	White	59.4	60.2	59.6	60.0	60.0	59.9	59.9	59.6	59.4	59.4	59.6	**59.7**
	Black	22.4	21.7	21.6	20.9	20.6	20.4	20.2	20.2	20.1	19.8	19.2	**20.7**
	Hispanic	14.1	13.5	13.6	13.5	13.6	13.8	13.9	14.1	14.3	14.6	14.8	**14.0**
	Asian	3.9	4.4	5.0	5.3	5.5	5.7	5.8	5.9	6.0	6.0	6.1	**5.4**
	American Indian	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	**0.3**
	Multiracial	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
Teacher sample	Total observations	77,327	76,585	76,794	76,947	77,868	78,821	78,762	76,545	74,835	73,493	73,969	**841,946**
	Total valid observations	77,149	76,393	76,575	76,764	77,661	78,636	78,610	76,322	74,299	72,369	71,779	**836,557**
Student ethnicity distribution	White	15.1	14.7	14.3	14.2	14.1	14.1	14.2	14.2	14.2	14.5	14.5	**14.4**
	Black	33.9	33.7	33.3	32.8	32.4	31.8	31.4	30.7	29.8	29.4	28.8	**31.6**
	Hispanic	37.9	38.2	38.3	38.5	38.8	39.0	39.2	39.2	39.3	40.0	40.1	**39.0**
	Asian	12.3	12.5	12.8	13.0	13.3	13.7	14.0	14.4	14.8	15.1	15.3	**13.7**
	Multiracial/Other	0.8	1.0	1.3	1.5	1.4	1.3	1.2	1.6	1.9	1.0	1.3	**1.3**
	Total enrollment	1,096,295	1,094,303	1,083,019	1,067,740	1,057,573	1,053,918	1,053,224	1,069,259	1,083,320	1,089,537	1,094,945	
"New" teacher race and ethnicity distribution	White	♦	63.9	65.5	67.5	66.4	65.2	65.9	64.0	62.5	67.0	65.8	**65.5**
	Black	♦	17.6	14.6	13.4	14.1	14.2	14.4	14.0	13.5	11.4	11.9	**14.4**
	Hispanic	♦	11.7	10.4	10.9	11.7	13.0	12.6	14.1	15.2	14.5	15.2	**12.3**
	Asian	♦	6.6	9.4	8.0	7.5	7.4	7.4	7.7	7.4	6.6	6.9	**7.5**
	American Indian	♦	0.3	0.2	0.3	0.4	0.2	0.3	0.3	1.4	0.6	0.2	**0.3**
	Multiracial	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
	Overall percent new[1]	♦	14.7	11.1	10.6	9.8	9.8	7.9	3.4	4.2	5.6	7.3	**7.7**
Sector leaver rates[2]	White	13.3	11.5	10.9	9.4	9.7	8.9	7.4	7.5	8.7	8.9	♦	**9.6**
	Black	11.9	7.6	8.8	7.5	6.9	7.0	5.8	6.4	7.1	8.3	♦	**7.8**
	Hispanic	12.4	7.4	8.9	7.0	7.5	6.5	5.4	5.6	6.4	7.1	♦	**7.4**
	Asian	10.2	8.9	9.3	9.4	8.8	8.0	5.9	6.7	7.9	7.7	♦	**8.2**
	American Indian	15.1	12.4	11.5	13.2	8.7	11.5	9.1	6.8	7.3	11.1	♦	**10.7**
	Multiracial	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
	Overall leaver rate[1]	12.7	10.0	10.1	8.7	8.8	8.1	6.7	7.0	8.0	8.4	♦	**8.8**
Average school free/reduced price lunch rate	White	67.2	69.7	79.3	77.1	77.3	75.1	73.2	81.2	81.9	79.4	79.6	**76.4**
	Black	81.1	78.6	86.6	83.9	84.6	82.9	82.2	88.3	89.4	88.0	88.4	**84.7**
	Hispanic	80.2	77.6	88.4	85.5	85.4	83.2	82.8	89.1	90.0	88.4	88.7	**85.4**
	Asian	70.9	73.4	82.7	80.0	80.1	78.1	75.5	83.0	84.4	82.3	82.3	**79.7**
	American Indian	68.6	72.0	80.6	77.0	77.0	76.4	72.7	79.7	81.5	80.6	80.2	**77.0**
	Multiracial	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
Average school percent minority students	White	80.8	81.6	82.1	82.2	82.5	82.4	82.3	81.9	81.6	81.3	81.2	**81.8**
	Black	95.7	95.6	95.6	95.5	95.6	95.5	95.5	95.3	95.1	95.0	94.9	**95.4**
	Hispanic	92.9	92.9	93.0	92.7	92.8	92.7	92.7	92.6	92.4	92.3	92.1	**92.6**
	Asian	89.0	89.3	90.0	89.6	89.5	89.2	89.0	89.0	88.7	88.6	88.0	**89.1**
	American Indian	86.8	88.9	88.8	87.0	88.2	87.9	86.6	86.5	88.1	88.5	87.7	**87.7**
	Multiracial	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
School data match rates	Free/reduced price lunch	95.5	96.4	97.5	97.2	97.0	97.1	96.5	96.5	96.2	96.5	95.8	**95.8**
	Race and ethnicity	95.5	96.4	97.5	97.2	97.0	97.1	96.5	96.5	96.2	96.5	95.8	**96.6**

♦ Estimates not applicable for this category or year

1 Estimates include observations with missing values on race and ethnicity question

2 Rates represent the proportion of teachers in a given year who did not appear in this sector's dataset in all subsequent years

General notes: Some of the estimates in this table may apply to very small samples of observations, such as those for certain race and ethnicity categories (e.g., American Indians); interpret with caution. Information on data sources, samples, and other issues in the Data Appendix. Details on all measures, including the identification of new hires and sector leavers, can be found in About the City Profiles. Relative frequencies may not add up to 100 due to rounding error.

Teacher and Student Diversity in Philadelphia Public Schools

1. SUMMARY OF FINDINGS

In 2012, 3 in 4 Philadelphia students were Black or Hispanic, compared with just over 1 in 4 teachers. During the period of time for which we have data, the White share of the district teaching force increased modestly, the Black share decreased modestly, and Hispanic representation, historically small, remained roughly the same. In terms of changes in actual numbers, the number of White and Hispanic teachers increased, while Black teachers experienced a population loss of nearly 19 percent. These trends were due in part to hiring patterns in district schools, in which new White teachers were consistently overrepresented while new Black teachers were consistently underrepresented, as well as comparatively high sector leaver rates among Black teachers working in charter schools particularly in the last years of our data.

PHILADELPHIA DATASET		
	District	**Charter**
Type of data	Teacher level	Teacher level
Years available	2001–2012	2007–2012
Linked b/w years	Yes	Yes
Multiracial category	No	Yes
Total sample size	127,046	14,083

2. SNAPSHOT OF TEACHER AND STUDENT RACE AND ETHNICITY IN PHILADELPHIA PUBLIC SCHOOLS

In 2012, our most recent year of data, about 3 in 4 students attending Philadelphia public schools (district and charter sectors) were Black (59 percent) or Hispanic (18 percent), as shown in Figure PHI-1. In the same year, about 69 percent of the Philadelphia teaching force was White, about 25 percent was Black and about 3 percent was Hispanic.

FIGURE PHI-1: SNAPSHOT OF STUDENT AND TEACHER RACE AND ETHNICITY, 2012
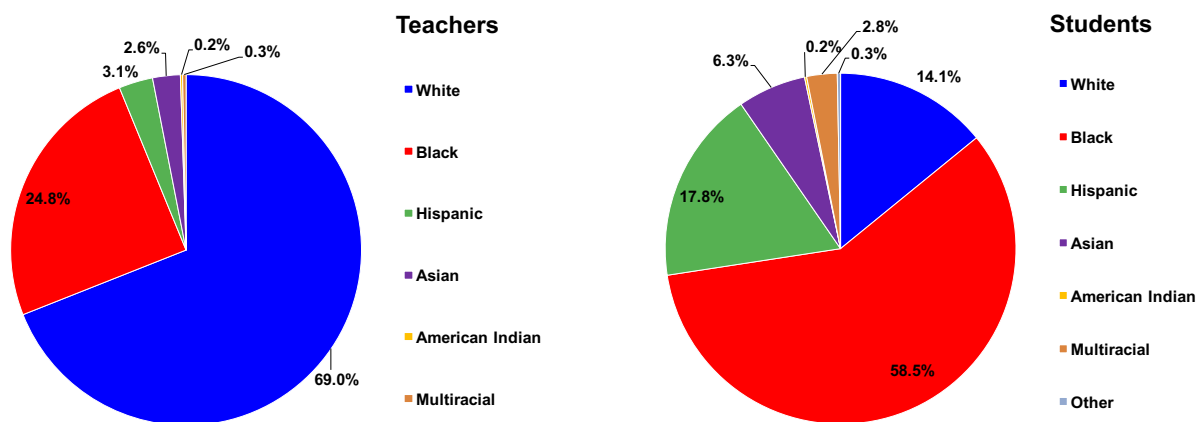
FOOTNOTE TO FIGURE: The "Multiracial" response was available to charter but not district school teachers in 2012, but it is retained in the figure above.

The representation gap between Black students and teachers was higher in charter schools than in district schools in 2012, whereas the gap between Hispanic students and teachers was similar across sectors (see Tables PHI-A and PHI-B).

3. TRENDS IN PHILADELPHIA'S PUBLIC SCHOOL STUDENT BODY AND TEACHING FORCE

As Figure PHI-2 illustrates, from 2001 to 2012, the proportion of the Philadelphia teaching force that was White

increased moderately in both sectors (4-7 percentage points), while there was a considerable decrease in the Black share of teachers in both sectors (about 8-9 percentage points). Since these trends occurred between 2001 and 2012 in district schools, and between 2007 and 2012 in charter schools, the change was more rapid in the latter sector. Finally, the proportion of Hispanic teachers exhibited a very slight increase in the charter sector and remained stable in district schools.[1]

FIGURE PHI-2: TEACHER RACE AND ETHNICITY DISTRIBUTION, BY SECTOR, 2001–2012
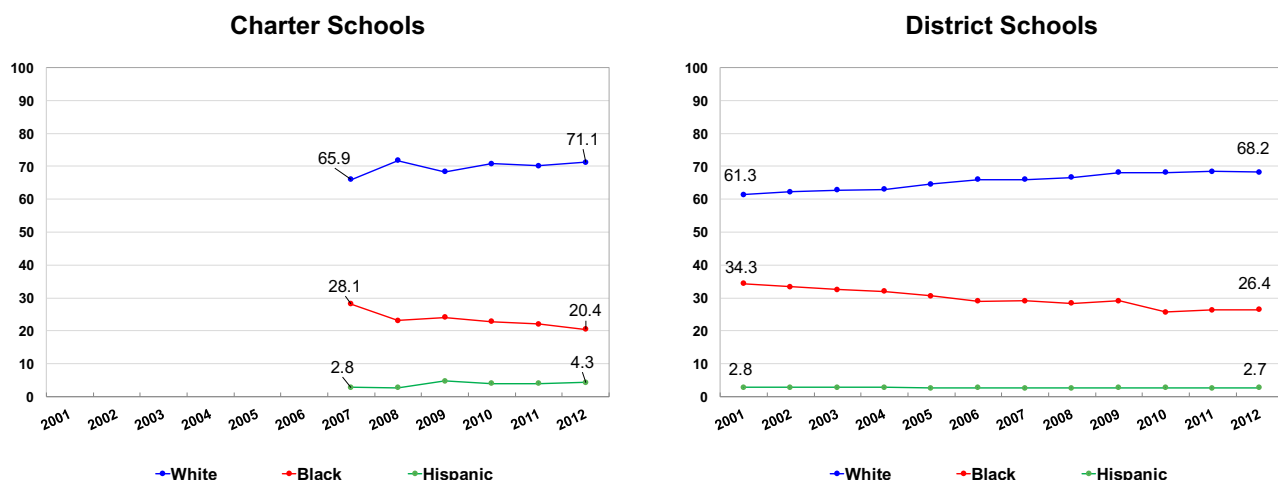
It also bears mentioning, in the context of these shifts in the race and ethnicity distribution of Philadelphia teachers, that the charter teaching workforce nearly doubled between 2007 and 2012, while the number of district teachers decreased around 17 percent (see Tables PHI-A and PHI-B).

Figure PHI-3, which includes teachers in both the charter and district sectors, presents another way to visualize these data. Here, we see changes within each racial and ethnic category over time.

FIGURE PHI-3: TEACHER POPULATION CHANGES BY RACE AND ETHNICITY, 2001–2012
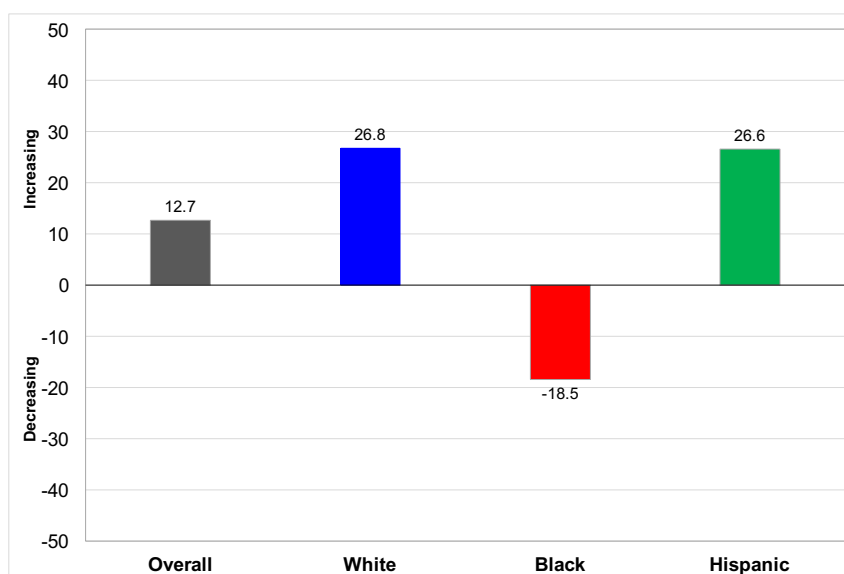
As you can see, differences in group sizes for the various racial and ethnic categories can mean that relatively modest changes in one group's proportional share can actually represent a fairly large shift within that category.

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1   When interpreting levels or trends in race and ethnicity distributions in this profile, particularly when comparing estimates between sectors, note that the "multiracial" category was available to charter teachers in all years (2007-12) but not for district teachers in any years. The relative frequencies are available, by year, in Tables PHI-A and PHI-B. They range from 0.5 to 1.2 percent of the charter sector in any given year

For example, while the proportion of White teachers in the district rose by only 6-7 percentage points during this period, the number of White teachers actually rose by nearly 27 percent. Similarly, the 8-9 point decrease in the share of all teachers who were Black represents an almost 19 percent loss in the total number of Black teachers. Meanwhile, the small share of Hispanic teachers remained quite small, although the number of Hispanic teachers increased by nearly 27 percent.

Figure PHI-4 illustrates the trends in the "representation gaps" between Black and Hispanic teachers and students (the proportion of students minus that of teachers, in percentage points), by sector. The Hispanic gap was similar in both sectors, increasing very slightly in both due largely to an increase in the Hispanic share of the student population. The Black representation gap in the district sector rose until 2006, after which it declined. Between 2007 and 2012, the Black gap increased by about 6 points in the charter sector, largely due to a rapid decline in the share of Black charter teachers; at the same time, it decreased in the district sector, largely due to the fact that Black representation among students declined more quickly than that among teachers.

FIGURE PHI-4: STUDENT-TEACHER REPRESENTATION GAP, BY RACE AND ETHNICITY AND SECTOR, 2001–2012
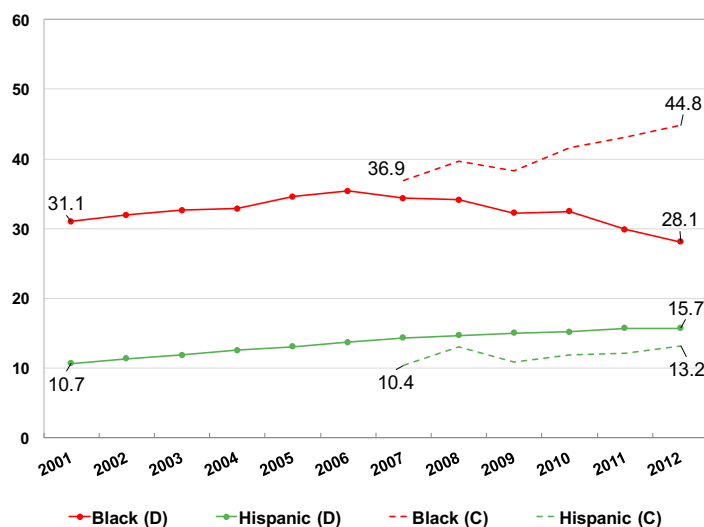
The fact that teaching is a female-dominated occupation means that Black and Hispanic men constitute only small proportions of the total teacher workforce in Philadelphia (Figure PHI-5), resulting in a demographic mismatch that is particularly acute for Black and Hispanic boys. In addition, female Hispanic teachers in Philadelphia also constitute only a tiny fraction of the teacher workforce, due to the small proportion of Hispanics among Philadelphia teachers. Thus, only Black female teachers represent a sizeable (though declining) proportion of the minority teaching force in Philadelphia.
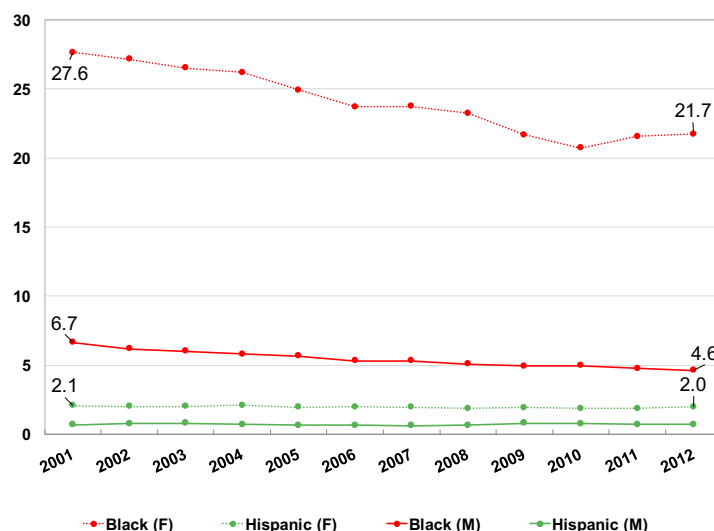
4. ARE NEW HIRES CONTRIBUTING TO TEACHER DIVERSITY IN PHILADELPHIA PUBLIC SCHOOLS?

Between 2007 and 2012, in our dataset, the district hiring rate (or, more accurately, the hire rate for teachers who were new to the sector—see "About the City Profiles") fluctuated between 7-10 percent until 2011 and 2012, when it dropped considerably. At the same time, the charter hire rate in each year was around 30-40 percent (see Tables PHI-A and PHI-B). As a result, during the years for which we have data on both sectors, charters hired as many teachers as did district schools, despite their smaller market share.

Figure PHI-6 compares the proportion of new hires each year, by sector, who were Black, Hispanic or White, with the overall citywide proportions of Black, Hispanic and White teachers, respectively, in the previous year.

FIGURE PHI-6: PERCENT OF NEW HIRES COMPARED WITH PERCENT OF ALL TEACHERS IN PREVIOUS YEAR, BY RACE AND ETHNICITY AND SECTOR, 2002–2012
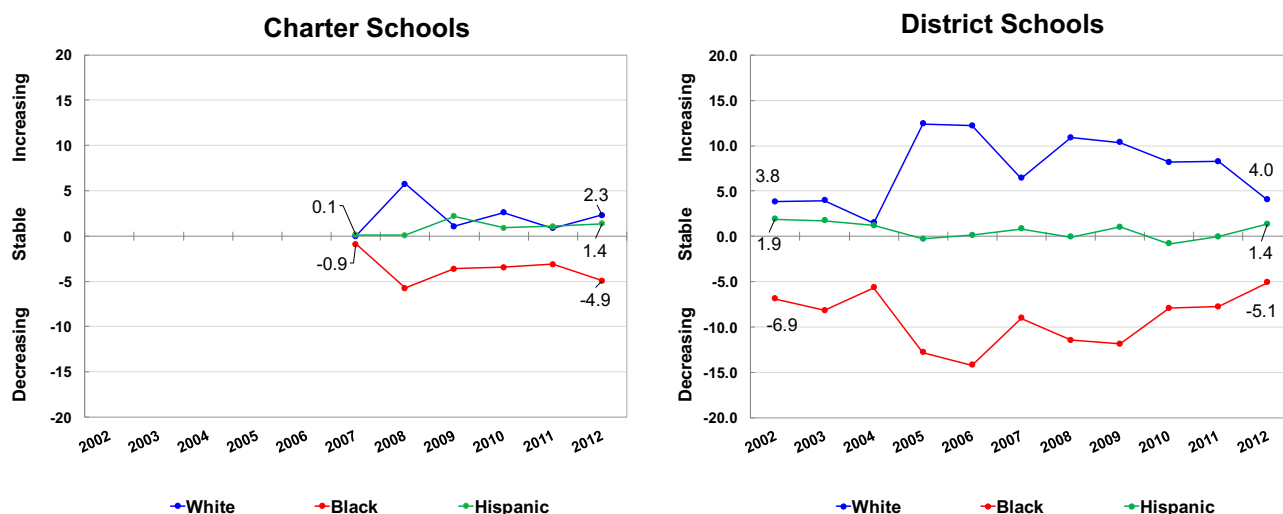
In the district sector, the proportion of new hires each year who were Black was consistently lower (by an average of 9-10 percentage points) than the proportion of Black teachers in the previous year. Hispanic new hires were consistently similar to their existing proportions, and White new hires were consistently overrepresented (by an average of about 8 percentage points across years).

In the rapidly expanding charter sector, hiring patterns among races and ethnicities were less consistent but, here too, the proportion of Black new hires was consistently below the proportion of Black teachers in the workforce the previous year.

5. ARE SECTOR LEAVING PATTERNS SERVING TO DIVERSIFY THE PHILADELPHIA TEACHER WORKFORCE?

Teacher leaver rates (or, more accurately, "sector leaver rates"—see "About the City Profiles") in Philadelphia district schools fluctuated between roughly 8-15 percent from 2001 to 2011, and fluctuated about 19-31 percent in charter schools from 2007 to 2011 (see Tables PHI-A and PHI-B). Every year, schools must draw deeply into the pool of available candidates to fill these vacancies, which, depending on the supply of qualified replacements, may hinder efforts to improve teacher diversity. To the extent that teacher leaver rates are higher among underrepresented groups (in this case, Blacks and Hispanics), the challenge is likely to be greater.

Among district schools, leaver rates (see Figure PHI-7) did not vary consistently by race and ethnicity, though the rates for Hispanic teachers were higher before 2008 (note that the rates in a given year express the proportion of that year's White, Black and Hispanic teachers who were not in the district in any subsequent year). In the charter sector, differences by race and ethnicity were more pronounced. Sector leaving rates were highest among Black charter school teachers (averaging roughly 37 percent), followed by Hispanic teachers (27 percent), and lowest among White teachers (20 percent). Some part of these differences, as well as the volatility of the charter trends in Figure PHI-7, may be attributable to small sample size. That said, between 2007 and 2011, charter schools employed only about 1 in 7 Philadelphia teachers, but 1 in 3 Black leavers were from charter schools.

FIGURE PHI-7: SECTOR LEAVER RATES, BY RACE AND ETHNICITY AND SECTOR, 2001–2011
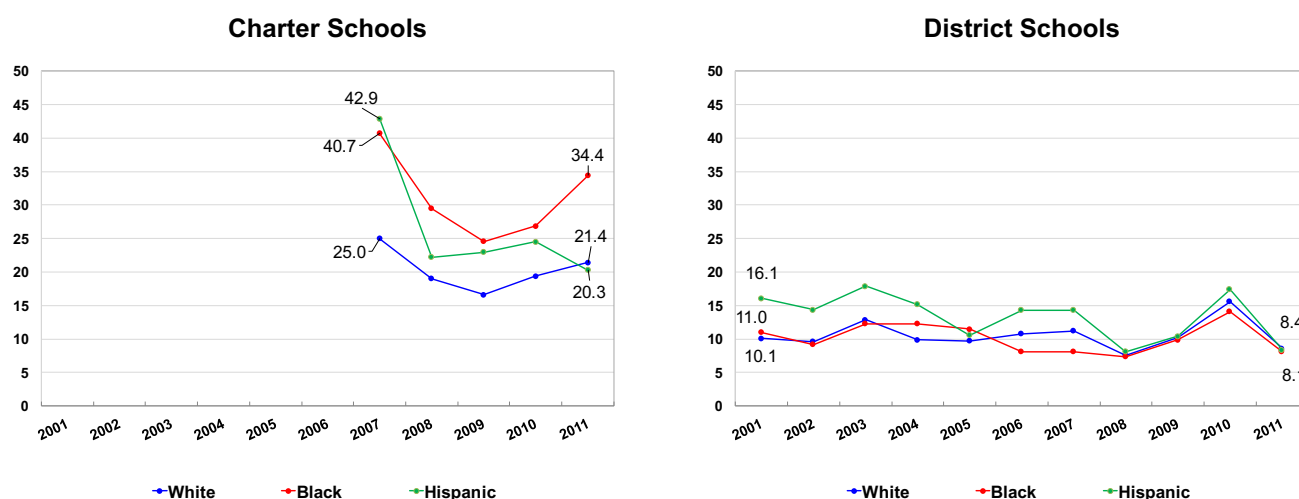
Figure notes: The year in this figure refers to the year before teachers left—e.g., the leaver rates for 2005 indicate teachers who were employed in 2005–06 and left before 2006–07.

In Figure PHI-8, we present cumulative new-teacher sector leaver rates for each sector, by race and ethnicity. Note that, for ease of presentation, these rates are not disaggregated by cohort, which means that the bottommost row of each table includes cumulative outcomes for one new-teacher cohort (the earliest one we can identify in our dataset), the second from the bottom includes the first two new-teacher cohorts, the third up includes the first three, and so on. In addition, rates should not be compared across sectors, as they reflect different periods of time.

In district schools, the cumulative sector leaver rates were quite similar between newly hired Black and White teachers, and significantly higher among Hispanics. Within three years, for example, half of new Hispanic hires had left the sector, compared with roughly 40 percent of their White and Black peers.

District Sector, 2001-2012			
Percent of new teachers who leave	**White**	**Black**	**Hispanic**
Within 1 year	18.3	15.1	23.7
Within 2 years	33.8	33.1	41.4
Within 3 years	40.7	39.9	50.6
Within 4 years	43.8	44.2	55.1
Within 5 years	46.4	46.2	57.1
Within 6 years	47.9	48.4	59.1
Within 7 years	49.0	49.7	60.8
Within 8 years	49.6	50.8	61.1
Within 9 years	50.0	51.2	61.4
Within 10 years	50.2	51.4	61.4

Charter Sector, 2007-2012			
Percent of new teachers who leave	**White**	**Black**	**Hispanic**
Within 1 year	26.2	38.3	21.7
Within 2 years	36.8	51.1	35.7
Within 3 years	41.4	56.0	41.4
Within 4 years	42.9	57.7	42.7

By contrast, in the charter sector, Blacks exhibited the highest cumulative new-teacher leaver rates, while those among Whites and Hispanics were more similar (note, once again, that each row of these tables contains a different new-teacher cohort, and Hispanic cohorts in charter schools are small).

6. WHICH STUDENTS ARE SERVED BY THE SCHOOLS IN WHICH BLACK AND HISPANIC TEACHERS WORK?

Figure PHI-9 presents the average rate of students' eligibility for free and reduced-price lunch (FRL), a rough proxy for low-income status, and the average percentage of Black and Hispanic students served by the schools where teachers of different races and ethnicities worked. Please note that these are teacher averages, not sector averages, and that they are pooled across all years, which means that they should not be compared between sectors.

FIGURE PHI-9: AVERAGE STUDENT FRL RATE AND AVERAGE PERCENT OF MINORITY STUDENTS, BY SECTOR AND TEACHER RACE AND ETHNICITY, POOLED (DISTRICT, 2001–2012; CHARTER, 2007–2012)
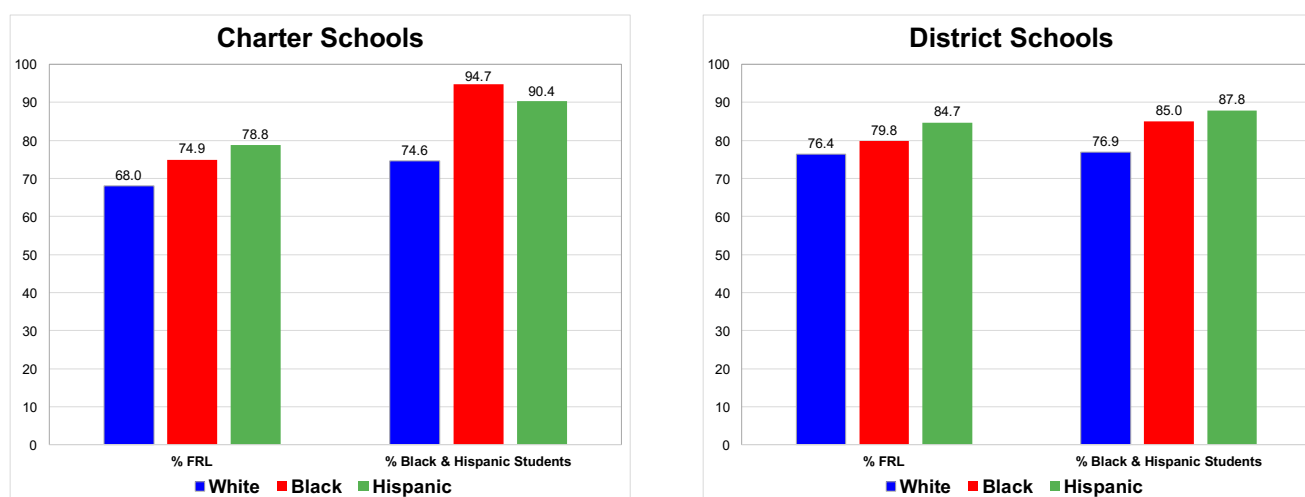
The typical Philadelphia public school teacher worked in a school in which 4 in 5 students were Black or Hispanic, and roughly the same proportion was eligible for subsidized lunch assistance.

In both district and charter schools, the average White teacher's school served a lower proportion of FRL-eligible students than the average Black or Hispanic teacher's schools (by about 4-10 percentage points). The gap between these two groups was even larger in terms of the percentage of minority students served by their schools. For example, the typical White teacher in the district sector worked in a school where 77 percent of

students were Black or Hispanic; for the typical Hispanic teacher, that was 85 percent; for the typical Black teacher, it was nearly 88 percent. In the charter sector, this gap was much larger, with the typical White teacher working in a school with a student body that was 75 percent Black and Hispanic, while the typical Black and Hispanic teachers worked in schools with concentrations of minority students that were 15 to 20 percentage points higher.

Table PHI-A	PHILADELPHIA CHARTER SECTOR						
Measure		2007	2008	2009	2010	2011	2012	Pooled
Teacher race and ethnicity distribution	White	65.9	71.7	68.3	70.7	70.1	71.1	**69.8**
	Black	28.1	23.1	24.1	22.8	22.0	20.4	**22.9**
	Hispanic	2.8	2.7	4.7	4.0	4.0	4.3	**3.9**
	Asian	2.6	1.7	2.3	1.9	2.4	2.9	**2.4**
	American Indian	0.1	0.1	0.1	0.0	0.0	0.1	**0.1**
	Multiracial	0.5	0.7	0.5	0.5	1.5	1.2	**0.9**
Teacher sample	Total observations	1,750	1,318	2,108	2,577	2,962	3,368	**14,083**
	Total valid observations	1,750	1,318	2,108	2,577	2,962	3,368	**14,083**
Student ethnicity distribution	White	17.8	17.3	17.4	15.6	14.4	14.8	**17.0**
	Black	65.0	62.8	62.4	64.4	65.1	65.2	**64.6**
	Hispanic	13.2	15.8	15.6	15.9	16.1	17.5	**14.6**
	Asian	2.6	2.9	3.2	2.7	2.8	3.2	**2.7**
	American Indian	◆	◆	◆	◆	0.3	0.2	**0.3**
	Multiracial/Other	1.4	0.9	1.4	1.3	1.3	1.5	**0.9**
	Total enrollment	29,726	32,058	34,136	40,519	47,080	55,031	
"New" teacher race and ethnicity distribution	White	◆	66.0	60.8	70.0	65.1	68.4	**66.1**
	Black	◆	27.0	27.5	24.2	23.3	21.3	**24.2**
	Hispanic	◆	4.0	7.5	3.4	4.8	4.8	**5.0**
	Asian	◆	1.8	3.4	1.9	4.1	4.3	**3.3**
	American Indian	◆	0.0	0.1	0.0	0.0	0.2	**0.1**
	Multiracial	◆	1.3	0.7	0.6	2.7	1.0	**1.2**
	Overall percent new[1]	◆	30.3	41.6	34.5	31.4	30.9	**33.6**
Sector leaver rates[2]	White	25.0	19.0	16.6	19.4	21.4	◆	**20.2**
	Black	40.7	29.5	24.6	26.9	34.4	◆	**31.3**
	Hispanic	42.9	22.2	23.0	24.5	20.3	◆	**24.9**
	Asian	48.9	36.4	29.2	36.0	38.6	◆	**37.9**
	American Indian	0.0	100.0	100.0	0.0	100.0	◆	**50.0**
	Multiracial	37.5	22.2	27.3	21.4	29.5	◆	**27.9**
	Overall leaver rate[1]	30.6	21.9	19.2	21.6	24.8	◆	**23.5**
Average school free/reduced price lunch rate	White	✚	✚	63.4	70.2	71.3	66.1	**68.0**
	Black	✚	✚	70.9	75.0	79.8	73.0	**74.9**
	Hispanic	✚	✚	76.3	80.6	81.5	76.9	**78.8**
	Asian	✚	✚	76.0	71.4	73.9	68.2	**71.7**
	American Indian	✚	✚	96.7	90.4	51.8	75.3	**77.9**
	Multiracial	✚	✚	85.5	82.2	80.4	76.3	**79.5**
Average school percent Black/ Hispanic students	White	71.9	69.9	71.9	75.5	77.0	76.4	**74.6**
	Black	96.1	95.6	94.9	94.9	95.1	92.7	**94.7**
	Hispanic	85.6	80.1	89.7	92.2	92.3	92.4	**90.4**
	Asian	73.6	94.3	79.3	78.2	81.5	83.7	**81.1**
	American Indian	97.9	100.0	99.2	65.5	98.4	99.5	**94.7**
	Multiracial	90.2	93.2	92.1	93.1	94.5	91.3	**92.8**
School data match rates	Free/reduced price lunch	14.7	27.4	95.7	97.2	97.5	96.9	**80.2**
	Race and ethnicity	95.9	95.8	99.1	99.8	100.0	98.3	**98.5**

◆ Estimates not applicable for this category or year
✚ Data not available (excluded due to low match rates)
[1] Estimates include observations with missing values on race and ethnicity question
[2] Rates represent the proportion of teachers in a given year who did not appear in this sector's dataset in all subsequent years

General notes: Some of the estimates in this table may apply to very small samples of observations, such as those for certain race and ethnicity categories (e.g., American Indians); interpret with caution. Information on data sources, samples, and other issues in the Data Appendix. Details on all measures, including the identification of new hires and sector leavers, can be found in About the City Profiles. Relative frequencies may not add up to 100 due to rounding error.

Table PHI-B		**PHILADELPHIA DISTRICT SECTOR**												
Measure		**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**Pooled**
Teacher race and ethnicity distribution	White	61.3	62.2	62.7	63.0	64.6	66.0	66.0	66.6	68.1	68.1	68.4	68.2	**65.4**
	Black	34.3	33.3	32.5	32.0	30.6	29.0	29.1	28.3	29.1	25.7	26.3	26.4	**29.6**
	Hispanic	2.8	2.8	2.9	2.8	2.7	2.7	2.6	2.6	2.7	2.7	2.6	2.7	**2.7**
	Asian	1.4	1.5	1.7	2.0	2.0	2.1	2.2	2.3	2.3	2.5	2.4	2.4	**2.0**
	American Indian	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	**0.2**
	Multiracial	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
Teacher sample	Total observations	11,349	11,149	11,208	10,937	10,697	10,467	10,148	10,148	11,357	11,044	9,683	9,466	**127,653**
	Total valid observations	11,326	11,122	11,173	10,895	10,646	10,421	10,098	10,112	11,275	10,963	9,615	9,400	**127,046**
Student ethnicity distribution	White	15.9	15.2	14.6	14.0	13.3	13.2	13.4	13.6	14.0	13.8	14.1	14.2	**14.3**
	Black	65.4	65.3	65.2	64.9	65.2	64.4	63.4	62.5	61.3	58.2	56.2	54.5	**62.4**
	Hispanic	13.5	14.2	14.7	15.4	15.7	16.4	16.9	17.3	17.8	17.9	18.3	18.4	**16.1**
	Asian	5.0	5.2	5.3	5.5	5.6	5.7	6.1	6.5	6.8	7.1	7.5	7.8	**6.1**
	American Indian	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	**0.2**
	Multiracial/Other	♦	♦	♦	♦	♦	♦	♦	♦	♦	2.9	3.7	4.5	**3.7**
	Total enrollment	197,083	192,683	189,779	186,051	183,188	174,718	166,248	157,183	153,205	155,856	146,482	139,503	
"New" teacher race and ethnicity distribution	White	♦	65.2	65.2	64.2	75.4	75.4	72.4	76.9	76.9	76.4	76.4	72.9	**72.3**
	Black	♦	27.4	25.2	26.9	19.2	16.4	20.0	17.4	15.8	18.3	17.4	20.2	**20.7**
	Hispanic	♦	4.7	4.5	4.1	2.6	2.8	3.5	2.6	3.6	2.2	2.9	4.3	**3.5**
	Asian	♦	2.3	3.5	4.8	2.3	3.8	3.6	2.8	2.9	3.1	2.2	1.7	**3.1**
	American Indian	♦	2.2	0.7	0.1	0.6	0.2	0.6	0.6	0.1	0.1	0.0	1.0	**0.4**
	Multiracial	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
	Overall percent new [1]	♦	10.5	11.1	11.1	9.3	9.3	9.3	10.5	15.6	9.0	1.4	4.5	**9.2**
Sector leaver rates [2]	White	10.1	9.6	12.9	9.9	9.7	10.8	11.2	7.6	10.2	15.6	8.6	♦	**10.6**
	Black	11.0	9.2	12.3	12.3	11.5	8.1	8.1	7.4	9.9	14.1	8.1	♦	**10.2**
	Hispanic	16.1	14.4	17.9	15.2	10.6	14.3	14.3	8.1	10.4	17.4	8.4	♦	**13.4**
	Asian	13.4	13.4	15.1	10.7	11.0	10.5	11.8	8.8	8.1	16.1	6.5	♦	**11.0**
	American Indian	11.8	10.0	20.0	13.6	7.7	33.3	5.3	4.5	4.3	4.3	9.5	♦	**12.4**
	Multiracial	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
	Overall leaver rate [1]	10.6	9.6	12.9	10.3	10.3	10.1	10.6	7.6	10.0	15.3	8.4	♦	**10.6**
Average school free/reduced price lunch rate	White	71.5	70.7	71.8	70.0	73.7	73.3	76.0	77.7	83.1	82.1	80.5	86.6	**76.4**
	Black	76.3	75.2	78.2	75.4	76.8	76.6	79.0	80.7	86.1	85.2	84.1	89.3	**79.8**
	Hispanic	85.3	85.2	79.3	80.8	77.8	83.4	85.4	85.6	89.5	87.7	86.1	91.0	**84.7**
	Asian	84.7	70.4	74.8	73.1	74.3	74.1	76.7	79.1	84.2	83.2	79.2	87.1	**77.9**
	American Indian	77.4	77.4	79.3	73.7	74.4	74.2	76.2	74.2	81.8	75.5	71.4	84.8	**77.2**
	Multiracial	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
Average school percent Black/ Hispanic students	White	74.9	76.0	77.2	78.0	78.6	79.0	78.4	78.4	78.9	76.0	74.2	72.8	**76.9**
	Black	85.0	85.6	86.2	85.9	85.7	86.3	86.0	85.4	85.1	83.0	82.4	81.6	**85.0**
	Hispanic	90.3	89.8	89.6	89.3	89.8	90.4	89.6	87.9	87.5	83.9	82.5	81.2	**87.8**
	Asian	73.8	74.2	76.9	78.8	79.1	78.7	79.9	79.9	79.8	78.1	74.2	73.3	**77.4**
	American Indian	85.4	91.1	90.1	89.2	88.3	87.8	84.6	84.2	84.6	79.4	73.4	68.9	**84.1**
	Multiracial	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
School data match rates	Free/reduced price lunch	90.8	90.6	92.5	92.8	91.3	91.3	87.6	87.9	92.3	92.6	92.1	89.2	**91.0**
	Race and ethnicity	90.8	90.6	92.5	92.8	91.3	92.2	92.0	92.3	92.3	92.6	92.1	91.1	**91.9**

♦ Estimates not applicable for this category or year

[1] Estimates include observations with missing values on race and ethnicity question

[2] Rates represent the proportion of teachers in a given year who did not appear in this sector's dataset in all subsequent years

General notes: Some of the estimates in this table may apply to very small samples of observations, such as those for certain race and ethnicity categories (e.g., American Indians); interpret with caution. Information on data sources, samples, and other issues in the Data Appendix. Details on all measures, including the identification of new hires and sector leavers, can be found in About the City Profiles. Relative frequencies may not add up to 100 due to rounding error.

Teacher and Student Diversity in San Francisco Public Schools

1. SUMMARY OF FINDINGS

In 2012, around 3 in 4 students in San Francisco public schools (the district sector only[1]) were Asian, Black or Hispanic, compared with only around half of the city's teachers. The share of White teachers decreased modestly between 2003 and 2012, with concurrent increases in the proportions of Hispanic and Asian teachers (but not of Black teachers, who experienced a slight decline). In terms of the actual numbers of teachers within these groups, both White and Black teachers experienced a decline, with Blacks suffering the greatest losses—about 1 in every 3 teachers. Meanwhile, as with their proportional share of the workforce, the numbers of Asian and Hispanic teachers increased moderately. During this time, new teacher hires did not contribute much to the diversification of the San Francisco teacher workforce; if anything, hires worked against it. In contrast, lower "sector leaver" rates among Asian and Hispanic teachers, relative to their White colleagues, were largely responsible for the increases among these two groups and thus improvement in the diversity of the San Francisco teacher workforce during the time period of our study.

SAN FANCISCO DATASET		
	District	**Charter**
Type of data	Teacher level	n/a
Years available	2003–2012	n/a
Linked b/w years	Yes	n/a
Multiracial category	No	n/a
Total sample size	29,113	n/a

2. SNAPSHOT OF TEACHER AND STUDENT RACE AND ETHNICITY IN SAN FRANCISCO PUBLIC SCHOOLS

About 3 in 4 students attending San Francisco public schools in 2012 (our most recent year of data) were racial or ethnic minorities, including Asian (41 percent), Black (10 percent) or Hispanic (26 percent).[2] In this same year, more than half of San Francisco's teachers were White (Figure SFO-1).

FIGURE SFO-1: SNAPSHOT OF STUDENT AND TEACHER RACE AND ETHNICITY, 2012
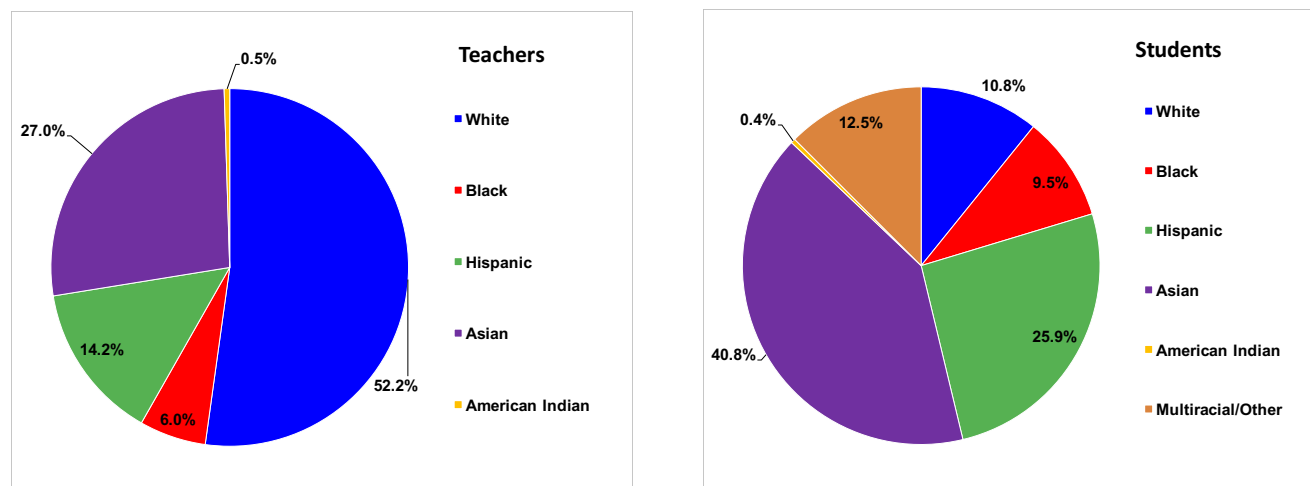
1   Given the extremely small size of the city's charter school sector during virtually all years for which we have district school data, the charter sector is excluded entirely from our analysis and district estimates are portrayed as citywide estimates. Note also that, had we chosen to include charters, we would not have been able to link teachers across years, which would have precluded charters' inclusion in most of the figures in this section.

2   Note that the multiracial/other category was also an option, and accounted for nearly 13 percent of all students, but is outside the scope of this analysis. This should be kept in mind when interpreting the trends discussed in this profile, as the existence of this category is likely to have had an effect on the share of students describing themselves as Asian, Black and Hispanic

As in all of the cities we examined, White teachers are heavily overrepresented (more than 5 to 1) relative to White students. As for the under-representation of teachers, the greatest student-teacher gaps were among Asians (14 percentage points) and Hispanics (12 percentage points), with a modest gap among Blacks (about 4 percentage points).

3. TRENDS IN THE SAN FRANCISCO PUBLIC SCHOOL STUDENT BODY AND TEACHING FORCE

As Figure SFO-2 illustrates, from 2003 to 2012, the proportion of San Francisco's teaching force that was White decreased moderately (about 5 percentage points), while the share of Black teachers also decreased, but less so (less than 2 percentage points). The proportion of Hispanic and Asian teachers, in contrast, increased by roughly 3-4 percentage points each.[3]

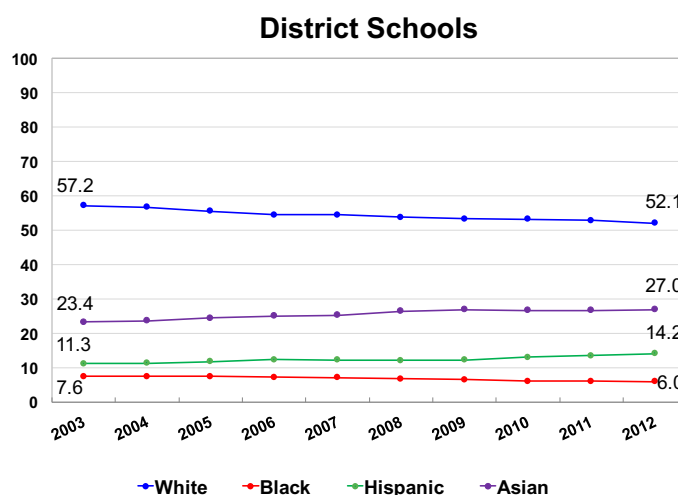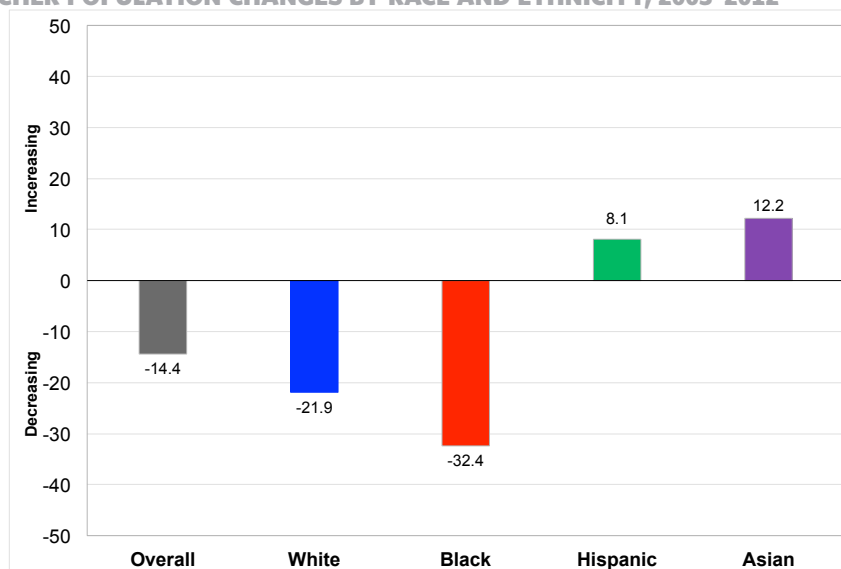**FIGURE SFO-2:** TEACHER RACE AND ETHNICITY DISTRIBUTION, 2003–2012

Figure SFO-3, which includes teachers in both the charter and district sectors, presents another way to visualize these data. Here, we see changes within each racial and ethnic category over time.

**FIGURE SFO-3:** TEACHER POPULATION CHANGES BY RACE AND ETHNICITY, 2003–2012

3   In our San Francisco data, in any given year, around 10-15 percent of observations have missing and/or non-valid values for the race and ethnicity variable. This is an unusually high proportion, but we are unable to determine the degree to which this affects our results—see Table SFO-B and the Data Appendix for more discussion.

As you can see, differences in group sizes for the various racial and ethnic categories can mean that relatively modest changes in one group's proportional share can actually represent a fairly large shift within that category. For example, while the proportion of White teachers in the district declined by only 5 percentage points, the actual number of White teachers fell by nearly 22 percent. Similarly, while the Black share of the teacher force fell by only about 2 points, the number of Black teachers actually declined by a hefty 32 percent. Meanwhile, the share of Asian and Hispanic teachers, which grew at similar rates of 3-4 percent, represented a 12 percent increase in the number of Asian teachers but an 8 percent increase in the number of Hispanic teachers.

Figure SFO-4 illustrates trends in "representation gaps" between students and teachers of the same racial or ethnic category, in this case Black, Hispanic and Asian gaps (the proportion of students minus that of teachers, in percentage points), between 2003 and 2012. As mentioned above, these gaps were considerably smaller among Blacks and Hispanics compared with our other cities. The Black student-teacher gap fell slightly over this time period, while the Hispanic gap increased slightly. In both cases, the shifts were attributable to concurrent changes in both the teacher and student distributions. The student-teacher gap among Asians, in contrast, decreased somewhat during this time. Part of this was due to an increase in the share of Asian teachers, accompanied by a small decrease in Asian representation among students. Nonetheless, the gap remained at about 20 percentage points.

FIGURE SFO-4: STUDENT-TEACHER REPRESENTATION GAP, BY RACE AND ETHNICITY, 2003–2012
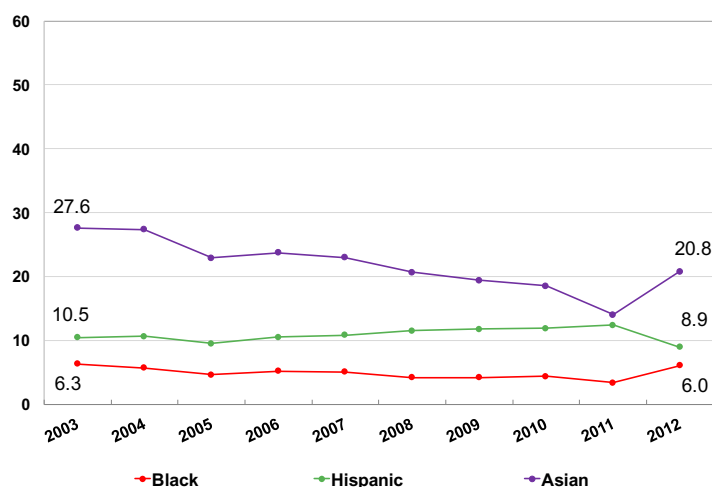
The fact that teaching is a female-dominated occupation means that Asian, Black and Hispanic men constitute only miniscule proportions of the total teacher workforce in San Francisco (Figure SFO-5). Thus, Asian, Black and Hispanic boys are particularly affected by the disparities in characteristics between teachers and students.
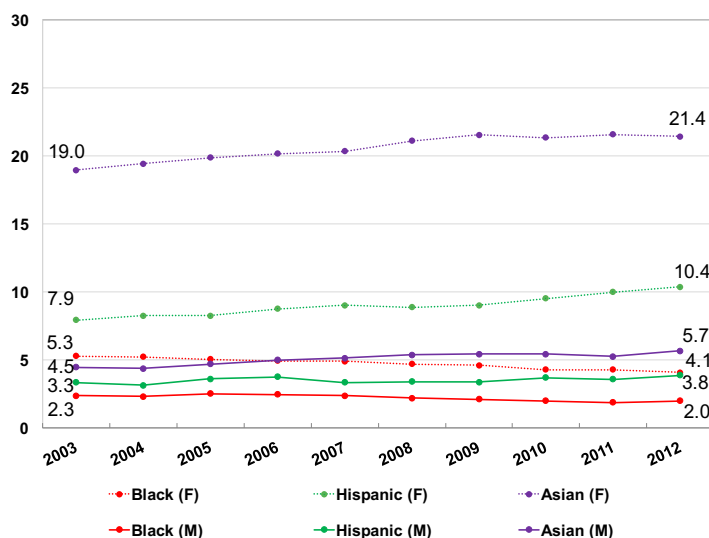
As Figure SFO-5 illustrates, the populations of male and female teachers (as a proportion of all teachers) of all races and ethnicities were quite stable over this period. Of these groups, only Asian female teachers represented a sizeable proportion (roughly 20 percent) of the minority teacher force.

4. ARE NEW HIRES CONTRIBUTING TO TEACHER DIVERSITY IN SAN FRANCISCO PUBLIC SCHOOLS?

In San Francisco, each year between 2003 and 2012, between 9-12 percent of teachers were new to the city (or, more accurately, new to the sector—see "About the City Profiles"). As in other cities, these rates tended to be a bit higher in the earlier years of our data compared with the later years, likely due to the recession.

Figure SFO-6 compares the proportion of new teachers each year, by race and ethnicity, with the overall proportions of the city's teaching force, also by race and ethnicity, in the previous year in district schools.

FIGURE SFO-6: PERCENT OF NEW HIRES COMPARED WITH PERCENT OF ALL TEACHERS IN PREVIOUS YEAR, BY RACE AND ETHNICITY, 2004–2012
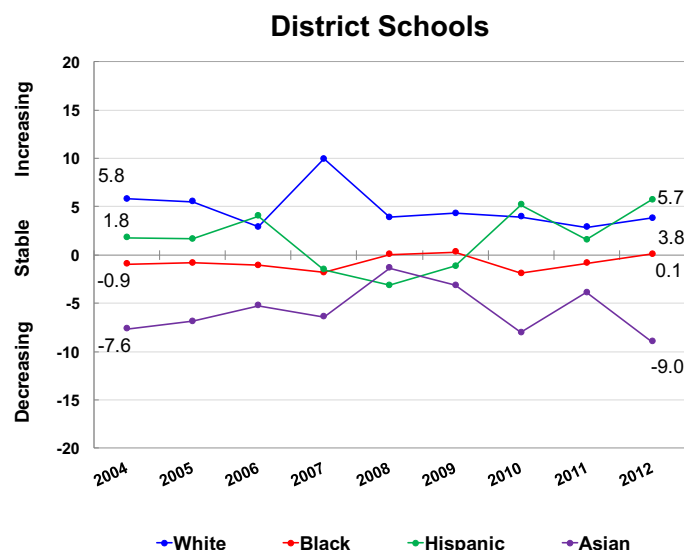
As you can see, the proportion of new hires who were Asian was consistently lower than the proportion of Asians employed in the previous year, usually by 5-7 percentage points. By contrast, the proportion of Black new hires was consistently similar to existing proportions. The pattern for Hispanic new hires was also relatively stable, though there was a bit more fluctuation for this group. Only among White teachers were new hires consistently overrepresented relative to previous years (by about 5 percentage points, on average).

5. ARE SECTOR LEAVING PATTERNS SERVING TO DIVERSIFY SAN FRANCISCO'S PUBLIC SCHOOL TEACHERS?

In San Francisco, as shown in Figure SFO-7, teacher "leaver rates" (or, more accurately, "sector leaver rates"— see "About the City Profiles") fluctuated around 10-11 percent between 2003 and 2011. (Note that, in Figure SFO-7, the rates in a given year express the proportion of that year's Asian, Black, Hispanic and White teachers who left after that year and did not return). Every year, schools must draw deeply into the pool of available candidates to fill these vacancies, which, depending on the supply of qualified replacements, may hinder efforts to improve teacher diversity. To the extent that teacher leaver rates are higher among underrepresented groups (in this case, Asians, Blacks and Hispanics), the challenge is likely to be greater.

From 2003 to 2011, the leaver rates were generally highest among White and Black teachers, especially after 2005, and quite a bit lower among Hispanic and especially Asian teachers. In fact, the leaver rate among White teachers was, on average, almost twice that of Asian teachers.

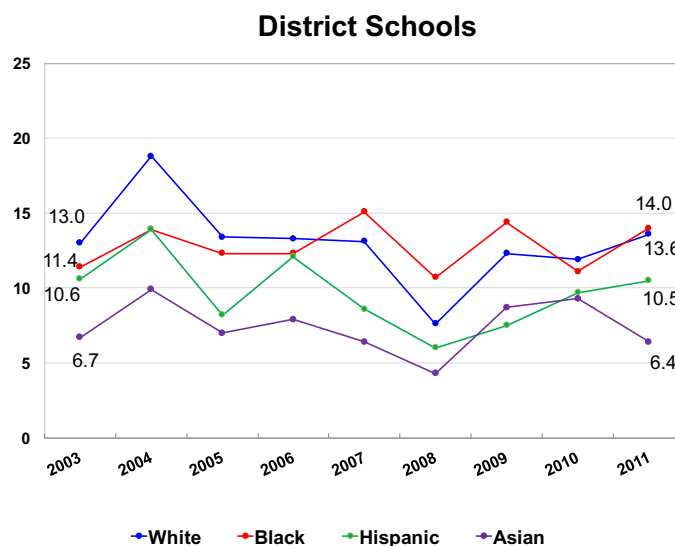**FIGURE SFO-7:** SECTOR LEAVER RATES, BY RACE AND ETHNICITY, 2003–2011

Figure notes: The year in this figure refers to the year before teachers left—e.g., the leaver rates for 2005 indicate teachers who were employed in 2005–06 and left before 2006–07.

In Figure SFO-8, we present cumulative new-teacher sector leaver rates, by race and ethnicity. Note that, for ease of presentation, these rates are not disaggregated by cohort, which means that the bottommost row of each table includes cumulative outcomes for one new-teacher cohort (the earliest one we can identify in our dataset), the second from the bottom includes the first two new-teacher cohorts, the third up includes the first three, and so on.

District Sector, 2003-2012				
Percent of new teachers who leave	White	Black	Hispanic	Asian
Within 1 year	24.8	30.9	24.1	16.6
Within 2 years	36.7	41.2	33.2	25.6
Within 3 years	42.7	47.1	41.3	28.6
Within 4 years	47.4	49.3	43.7	30.9
Within 5 years	49.6	51.5	46.5	32.7
Within 6 years	50.8	52.2	47.2	33.9
Within 7 years	52.1	53.7	48.3	34.1
Within 8 years	52.3	54.4	48.3	34.3

Cumulative leaver rates for new teachers were generally the highest among Black teachers in our dataset, slightly lower among Hispanics and Whites, and lowest among Asians. After three years, nearly half of new Black teachers, and 2 in 5 new Hispanic and White teachers, had left the sector, compared with only about 30 percent of Asian new hires.

6. WHICH STUDENTS ARE SERVED BY THE SCHOOLS IN WHICH MINORITY TEACHERS WORK?

Figure SFO-9 presents the average rate of students' eligibility for free and reduced-price lunch (FRL), a rough proxy for low-income status, and the average percentage of Asian, Black and Hispanic students served by the schools where teachers of different races and ethnicities worked. Please note that these are teacher averages, not sector averages.

FIGURE SFO-9: AVERAGE STUDENT FRL RATE AND AVERAGE PERCENT OF MINORITY STUDENTS, BY TEACHER RACE AND ETHNICITY, POOLED (2003–2012)
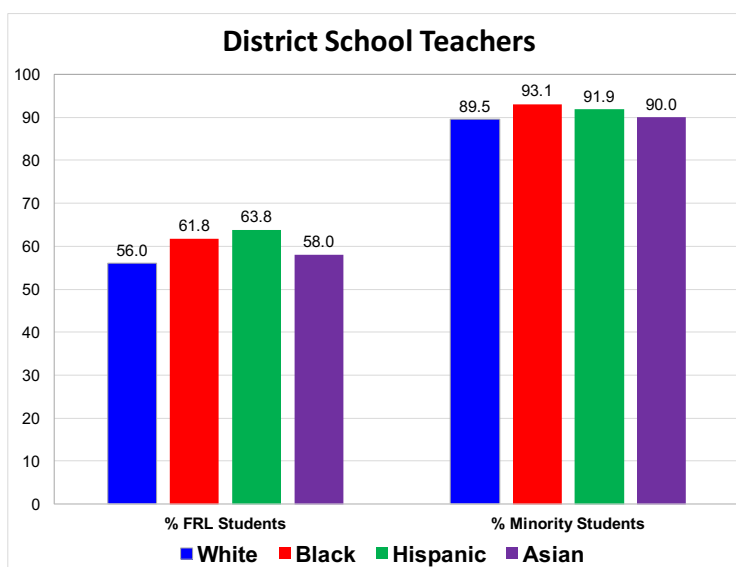
Between 2003 and 2012, the typical San Francisco teacher worked in a school where 56-64 percent of students were eligible for subsidized lunch, the lowest rates in all of the cities studied. The lowest average FRL rates were found among schools where the typical White teacher (56 percent) and Asian teacher (58 percent) worked, followed by the typical Hispanic teacher (62 percent) and Black teacher (64 percent).

As Figure SFO-9 also demonstrates, the typical teacher in San Francisco, of whatever race or ethnicity, worked in a school where the student population was nearly 90 percent or more Asian, Black or Hispanic. These figures

varied quite a bit more by teacher race and ethnicity, however, when looking only at schools with high concentrations of Black and Hispanic students (not shown in Figure SFO-9). For example, around half of the typical Black or Hispanic teacher's students are Black or Hispanic, compared with 1 in 3 students for White teachers and 1 in 4 for Asian teachers.

Table SFO-B	SAN FRANCISCO DISTRICT SECTOR										
Measure		**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**Pooled**
Teacher race and ethnicity distribution	White	57.2	56.8	55.6	54.5	54.5	53.8	53.4	53.3	52.9	52.1	**54.5**
	Black	7.6	7.5	7.5	7.3	7.2	6.8	6.7	6.2	6.1	6.0	**6.9**
	Hispanic	11.3	11.4	11.8	12.5	12.3	12.2	12.4	13.2	13.5	14.2	**12.4**
	Asian	23.4	23.8	24.5	25.2	25.4	26.5	27.0	26.8	26.8	27.0	**25.6**
	American Indian	0.5	0.6	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.5	**0.6**
	Multiracial	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Teacher sample	Total observations	3,641	3,639	3,414	3,365	3,295	3,307	3,368	3,218	3,267	3,246	**33,760**
	Total valid observations	3,280	3,202	2,960	2,890	2,803	2,764	2,843	2,749	2,813	2,809	**29,113**
Student ethnicity distribution	White	9.6	9.3	9.3	9.2	10.3	10.8	10.7	11.3	12.0	10.8	**10.3**
	Black	14.5	13.9	13.2	12.1	12.5	12.3	11.0	10.8	10.6	9.5	**12.0**
	Hispanic	21.4	21.7	22.0	21.3	23.0	23.1	23.7	24.1	25.0	25.9	**23.1**
	Asian	51.4	51.0	51.1	47.4	48.9	48.4	47.1	46.4	45.3	40.8	**47.8**
	American Indian	0.6	0.6	0.6	0.6	0.6	0.6	0.4	0.5	0.5	0.4	**0.5**
	Multiracial/Other	2.6	3.4	3.8	9.4	4.7	4.8	7.0	6.9	6.6	12.5	**6.2**
	Total enrollment	57,805	57,144	56,236	56,183	55,069	55,183	55,140	55,571	56,222	56,970	
"New" teacher race and ethnicity distribution	White	◆	63.0	62.3	58.5	64.5	58.4	58.1	57.4	56.1	56.7	**59.5**
	Black	◆	6.7	6.7	6.4	5.5	7.3	7.1	4.7	5.3	6.2	**6.2**
	Hispanic	◆	13.0	13.0	15.9	10.9	9.2	11.1	17.5	14.7	19.3	**13.8**
	Asian	◆	15.8	16.9	19.3	18.8	24.1	23.3	19.0	22.9	17.8	**19.7**
	American Indian	◆	1.5	1.1	0.0	0.4	1.2	0.4	1.4	0.9	0.0	**0.8**
	Multiracial	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
	Overall percent new[1]	◆	12.8	11.2	10.7	10.7	11.2	8.5	7.1	10.3	8.7	**10.2**
Sector leaver rates[2]	White	13.0	18.8	13.4	13.3	13.1	7.6	12.3	11.9	13.6	◆	**13.1**
	Black	11.4	13.9	12.3	12.3	15.1	10.7	14.4	11.1	14.0	◆	**12.8**
	Hispanic	10.6	13.9	8.2	12.1	8.6	6.0	7.5	9.7	10.5	◆	**9.7**
	Asian	6.7	9.9	7.0	7.9	6.4	4.3	8.7	9.3	6.4	◆	**7.4**
	American Indian	12.5	33.3	6.7	13.3	0.0	6.2	25.0	6.2	22.2	◆	**14.6**
	Multiracial	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
	Overall leaver rate[1]	11.1	15.8	11.1	11.7	10.9	6.7	10.9	10.8	11.3	◆	**11.2**
Average school free/reduced price lunch rate	White	49.4	53.5	55.1	56.6	53.5	55.4	56.5	60.5	63.3	57.5	**56.0**
	Black	55.6	57.8	59.1	62.9	60.0	62.9	61.3	67.0	70.6	66.6	**61.8**
	Hispanic	57.1	61.2	61.4	64.2	61.1	62.5	64.0	67.6	71.8	65.9	**63.8**
	Asian	51.2	56.9	58.2	60.4	57.0	58.2	58.2	60.1	62.4	57.1	**58.0**
	American Indian	49.4	56.6	56.5	57.3	53.5	54.6	56.3	64.9	70.2	65.3	**58.9**
	Multiracial	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Average school percent minority students	White	90.3	90.6	90.5	89.9	89.1	89.4	89.7	88.5	87.7	88.6	**89.5**
	Black	94.5	94.3	93.6	93.9	92.5	92.8	92.0	91.5	91.4	93.0	**93.1**
	Hispanic	93.0	92.8	92.6	92.4	91.9	91.8	92.0	91.1	90.7	91.4	**91.9**
	Asian	90.8	90.8	90.7	90.6	89.7	90.0	90.2	89.1	88.3	89.7	**90.0**
	American Indian	89.7	93.1	91.7	88.4	87.1	88.7	90.6	89.4	90.9	92.4	**90.2**
	Multiracial	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
School data match rates	Free/reduced price lunch	81.2	80.2	81.8	81.8	82.2	82.6	81.7	83.9	84.9	85.0	**82.5**
	Race and ethnicity	81.2	80.5	82.2	82.6	83.1	82.6	82.4	84.5	85.6	85.6	**83.0**

◆ Estimates not applicable for this category or year

[1] Estimates include observations with missing values on race and ethnicity question

[2] Rates represent the proportion of teachers in a given year who did not appear in this sector's dataset in all subsequent years

General notes: Some of the estimates in this table may apply to very small samples of observations, such as those for certain race and ethnicity categories (e.g., American Indians); interpret with caution. Information on data sources, samples, and other issues in the Data Appendix. Details on all measures, including the identification of new hires and sector leavers, can be found in About the City Profiles. Relative frequencies may not add up to 100 due to rounding error.

NOTE: Since we were unable to obtain charter data for San Francisco, we were unable to produce a Table SFO-A.

Teacher Diversity
in Washington, D.C., Public Schools

Despite extensive efforts over the past year and a half, we have been unable to procure teacher-level data for district and charter schools in Washington, D.C.[1] We were therefore forced to draw data from a sample provided by the U.S. Department of Education's Schools and Staffing Survey. Unfortunately, this only allows us to provide a very general picture of the citywide situation in district and charter schools combined.[2] While these data should be interpreted with caution, due primarily to small sample size, they do suggest an alarming picture regarding teacher diversity.

Between 2003 and 2011, the proportion of the D.C. teaching force that was White increased substantially—more than doubling from 16 percent to 39 percent. At the same time, the Black share of the workforce contracted by a similar amount, from 77 percent to 49 percent, while the share of Hispanic teachers increased modestly. While Black teachers experienced at least some decline as a proportion of the workforce in all of the cities we examined, the shrinkage of the Black teacher force in Washington, D.C., is alarming in its sheer magnitude.
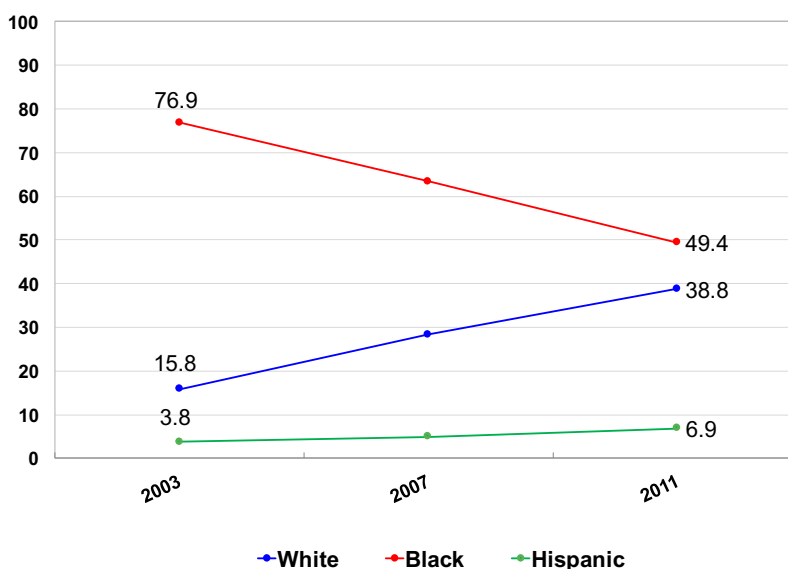
1   See Data Appendix for information on FOIA requests

2   Unlike most of our other teacher-level data, our DC estimates do not come from administrative data, which we were unable to obtain (see previous footnote), but rather from the nationally representative Schools and Staffing Survey, which is administered by the National Center for Education Statistics of the US Department of Education. See Data Appendix for more information

SECTION IV:

Cross-City Patterns and Trends

Underneath national trends in teacher workforce diversification, there are significant variations among locales and for different racial and ethnic groups.

In Section III, Richard Ingersoll describes the national trends in teacher diversity. He finds that, over the past 25 years, "minority" teachers—Asian and Pacific Islander, Black, Hispanic, American Indian and multiracial—have increased as a share of the total teacher workforce, going from 12 percent to 17 percent. Nevertheless, improvements in representation gaps between minorities in the student body and minorities in the teaching force have been much more modest, since the numbers of minority students—and especially Hispanic students—have also grown quickly.

In the broadest strokes, trends in the nine cities we examine here reflect much of the national picture. The following table, CON-1, collects from the city "snapshots" the shares of teacher and student populations by race and ethnicity in the most recent year of data.[1]

CON-1: SNAPSHOT SHARE OF TEACHER AND STUDENT POPULATION IN ALL PUBLIC SCHOOLS BY RACE AND ETHNICITY

CITY*	WHITE		BLACK		HISPANIC		ASIAN	
	TEACHER	STUDENT	TEACHER	STUDENT	TEACHER	STUDENT	TEACHER	STUDENT
BOSTON	63.1	11.7	21.3	36.5	9.5	41.8	5.6	7.9
CHICAGO	51.5	8.8	26.3	41.4	16.1	43.9	3.8	3.4
CLEVELAND	71.0	14.5	23.7	67.6	3.1	13.8	1.8	0.8
LOS ANGELES	42.9	11.0	10.5	10.2	33.5	70.7	12.3	6.2
NEW ORLEANS	50.9	6.2	42.8	87.9	3.3	3.2	1.8	1.8
NEW YORK CITY	59.6	14.3	19.2	28.4	14.8	39.5	6.1	15.1
PHILADELPHIA	63.1	14.3	21.3	57.2	9.5	18.1	5.6	6.5
SAN FRANCISCO	52.2	10.8	6.0	9.5	14.2	25.9	27.1	40.8

 *For reasons explained in the city profile, Washington, D.C., data for this table are not available.

While only 1 in every 10 students in these cities is White, nearly 6 in every 10 teachers are, on average, White. Many districts have achieved rough parity between the shares of Asian students and teachers, with a few notable exceptions among districts with large numbers of Asian students– e.g., New York City and San Francisco. Most strikingly, Black and Hispanic teachers are underrepresented on a substantial scale: In Boston and Los Angeles, the gap between the share of Hispanic students and teachers is more than 30 percentage points, while in Cleveland and New Orleans, the gap in the share of Black students and teachers is more than 40 percentage points. Given the other gaps that are often discussed in education circles—educational "achievement gaps" and educational "opportunity gaps"—and the educational benefits that a diverse teaching force can bring (discussed in Section II), these gaps should be matters of serious educational concern.

Los Angeles is notable among these cities for its lack of representation gaps among most minority groups—indeed the shares of Black students and Black teachers are nearly at parity, while Asian teachers are overrepresented. But even here, the share of Hispanic students—now about 7 in every 10 students in Los Angeles—has grown so quickly as to be more than double the share of Hispanic teachers. The recent progress that Los

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1   For Boston, Chicago, Cleveland and Los Angeles, the final year is 2011-12; for New Orleans, New York City, Philadelphia and San Francisco, the final year is 2012-13.

Angeles has made in narrowing this gap, despite the change in student demographics, is laudable. Indeed, Los Angeles stands out as the one city that has seen significant growth of the Hispanic teacher share in both the district and charter sectors.

The city profiles reveal that the representation gaps for Black and Hispanic male teachers and students are particularly wide—an unfortunate intersection of the fact that teaching is a predominantly female occupation and the generally low representation rates for racial and ethnic minorities.

Further, the city profiles show that the representation gaps for Black and Hispanic teachers and students are more pronounced in the charter sector. Among our cities, charter teaching forces tend to be whiter and charter student populations blacker and browner than their district counterparts. But in every city, charter schools and district schools are both contributing to the overall student-teacher representation gaps among Blacks and Hispanics.

TRENDS IN TEACHER DIVERSITY

As one digs deeper into what has been happening in our nine cities, disquieting trends that depart from the national trends begin to appear. Specifically, we are very troubled by the fact that, in every city and every sector, the share of Black teachers in the workforce has been declining at rates ranging from the slight to the massive—from roughly 1 percent in Boston's charter sector and Cleveland's district sector, to more than 24 percent in New Orleans (combined sectors) and nearly 28 percent in Washington, D.C. (combined sectors).

The following table, CON-2, captures these changes in the White, Black and Hispanic shares of the teacher workforce over the period of time covered in our report.

CON-2: CHANGES IN SHARES OF THE TEACHING FORCE IN ALL PUBLIC SCHOOLS BY RACE AND ETHNICITY

CITY	SECTOR (duration of data)	WHITE TEACHERS	BLACK TEACHERS	HISPANIC TEACHERS
BOSTON	DISTRICT (10 years)	+0.3	-3.1	+1.0
	CHARTER (4 years)	+1.8	-1.0	-0.8
CHICAGO	DISTRICT (9 Years)	+4.2	-10.9	+3.8
	CHARTER (3 years)	+1.7	-2.5	-0.3
CLEVELAND	DISTRICT (11 years)	-1.4	-1.3	+1.0
	CHARTER (11 years)	+18.7	-18.2	-0.7
LOS ANGELES	DISTRICT (9 years)	-6.6	-2.4	+7.1
	CHARTER (9 years)	12.8	-1.2	+13.0
NEW ORLEANS	CITYWIDE (10 years)	+19.8	-24.2	+2.0
NEW YORK CITY	DISTRICT (10 years)	+0.2	-3.1	+0.7
	CHARTER (2 years)	-4.7	-1.3	+0.2
PHILADELPHIA	DISTRICT (11 years)	+4.2	-9.5	-0.1
	CHARTER (5 years)	+6.9	-7.7	+1.2
SAN FRANCISCO	DISTRICT (9 years)	-5.0	-1.6	+3.0
WASHINGTON, D.C.*	CITYWIDE (8 years)	+23.0	-27.5	+3.1

*As noted in the city profile, these Washington, D.C., figures are based on the U.S. Department of Education SASS study, since we were unable to obtain data from D.C. state and city agencies.

When one looks at these declines in workforce shares as changes in the actual numbers of Black teachers—the trend made visible to students, families and communities in classrooms and schools—the extent of these losses can seem staggering. The following table, CON-3, collects teacher population changes for the cities studied. It shows that Black teachers have experienced substantial losses in every city, comprising a disproportionately large share of overall reductions in these cities' teaching forces.

CON-3: CHANGES IN TEACHER POPULATION OVERALL AND BY RACE AND ETHNICITY

CITY*	OVERALL	WHITE TEACHERS	BLACK TEACHERS	HISPANIC TEACHERS
BOSTON	-3.3	-0.8	-18.3	+1.1
CHICAGO	-13.4	-3.2	-39.2	+6.4
CLEVELAND	-17.4	-12.0	-33.9	-9.4
LOS ANGELES	-16.9	-28.0	-33.2	+6.5
NEW ORLEANS	-44.4	+3.3	-62.3	+43.5**
NEW YORK CITY	-2.0	-1.9	-15.1	+2.4
PHILADELPHIA	+12.7***	+26.8	-18.5	+26.6
SAN FRANCISCO	-11.9	-21.9	-32.4	+8.1

*For reasons explained in the city profile, Washington, D.C., data for this table are not available.

**While the percentage growth of Hispanic teachers in New Orleans is quite high, there were only 62 Hispanic teachers in the 2002 baseline, so there was only a modest increase in actual numbers.

***The overall growth rate for Philadelphia is inflated. We were not able to obtain the full 10 years of data for the charter sector, and so the starting point reflects only district numbers. Unlike the charter sectors in Boston, Chicago and New York City, where we also lack a full 10 years of data but where there are a relatively small number of schools at the start of the 10-year time span studied, there is a comparatively large charter sector in Philadelphia that predates this time period. This means that we do not have a reliable baseline for the charter population. The district sector has a 17 percent decrease in teacher population, and while the charter sector is growing, it is certainly not growing at a rate that would produce an overall growth rate of 12.7 percent. It is most likely that Philadelphia, like the other eight cities, saw an overall loss in teachers over the time we studied it.

Did seniority-based layoffs play any role in the declining numbers of Black teachers? We have found no such evidence. Although we cannot identify teachers who left our datasets due to layoffs specifically, it is highly unlikely that seniority-based layoffs would result in a disproportionate number of Black teachers being dismissed unless Black teachers were overrepresented among inexperienced teachers (particularly among teachers in their first three years), relative to teachers of other races and ethnicities. In those cities/sectors where we have data on experience, this was not the case.

While further research should be done to establish the full extent of these declines and their causes, the emerging pattern can only be described as alarming. There is a clear need for targeted interventions aimed at reversing these losses.

Hispanics are the fastest-growing student demographic in America's public schools.[2] As a consequence, the Hispanic share of the teaching force must also grow quickly to simply prevent a wider representation gap from opening up between Hispanic teachers and students. But while teacher workforce trends for Hispanics are more positive than those for Blacks when it comes to shares of the workforce, the Hispanic share of the teacher workforce in most of the cities studied is either growing only modestly or experiencing no growth at all (see CON-2). Los Angeles stands out as the one city that has seen significant growth of the Hispanic teacher share in both the district and charter sectors.

Viewed from the vantage point of changes in the teacher population, the results for Hispanics are better, but

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2   William Hussar and Tabitha Bailey, Projection of Education Statistics to 2022. Washington, D.C.: National Center for Education Statistics, U.S. Department of Education, 2014. p. 5.

still mixed. The cities that experienced 6 percent to 8 percent rates of Hispanic teacher population growth—Chicago, Los Angeles and San Francisco—are making the most substantial progress.

Without substantial progress on this front, the already large Hispanic student-teacher representation gaps will only grow wider.

NEW TEACHER HIRES AND TEACHER LEAVERS

In Section III, Richard Ingersoll found that, at the national level, the primary obstacle to faster diversification of the American teaching force was not insufficient recruitment and hiring of more new minority teachers, but their comparatively high attrition rates.

In assessing the relative importance of new hires and sector leaver rates in promoting the teacher diversity in the nine cities,[3] one must keep in mind three important developments: First, all of the cities experienced declines in their teaching forces during this period of time, largely due to recession-driven budget cuts. Second, in almost all of these cities, significant numbers of new charter schools opened, leading to a shift of students, teachers and resources from the district sector to the charter sector. Third, teacher leaver rates in the charter sector are generally higher than in the district sector.[4] As a consequence of these three trends, the hiring of new teachers was generally depressed over the period of time these cities were studied—a development reflected in the shrinking size of the teacher workforce. Further, the hiring that did take place was disproportionately concentrated in the charter sector.

That said, in the nine cities we studied, there are no clear patterns that cut across all locales.

New teacher hires were the primary driver of decreasing diversity in the Chicago teaching force and declines in the Black share of teachers in Boston. Black hires in both the district and charter sectors of Boston and Chicago were well below the Black share of their teaching forces, while new White hires were well above their share. Teacher leaver rates in the Chicago charter sector were a contributory factor: while very volatile, growing three-fold over three years, these rates were generally higher for Black teachers.

Cleveland experienced problems on both sides of the ledger leading to decreased teacher diversity. As the Cleveland district contracted and the charter sector expanded, new teacher hires in the charter sector were below the Black share of the teaching workforce, and teacher leavers in the charter sector were disproportionately Black.

In Los Angeles, we saw increased teacher diversity, which in large part came from the growth in the Hispanic share of the district teacher workforce. And this was largely a function of lower teacher leaver rates for Hispanics. Likewise, the modest increase in the share of Asian teachers was largely driven by the fact that they left the district at lower rates than White and Black teachers. (We were not able to obtain data to assess new teacher hires and teacher leavers in the charter sector.)

In New Orleans, the share of new Black hires—both before and after the post-Katrina mass firing of the entire teaching force—was far below the Black share of the teaching force in the previous year, while the share of new White hires was far above the White share of the teaching force. This hiring pattern was so strong that it overcame a significantly higher teacher leaver rate among White teachers.

In New York City, the rate of new Black hires in district schools was substantially below the Black share of the workforce in the previous year, which was the primary driver in the shrinking share of Black teachers in the district. (We were not able to obtain data to assess new teacher hires and teacher leavers in the charter sector.)

In Philadelphia, the rates of new Black hires in both the district and charter sectors, which were well below the Black share of the workforce, and a disproportionately high rate of Black teacher leavers in the charter sector, drove down Black teacher numbers. At the same time, a disproportionately high rate of Hispanic teacher leavers in the district sector drove down the number of Hispanic teachers, despite modest increases in the Hispanic teacher hire rate.

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3   Please note: Due to limitations in the data, we identify "new" teachers as those who "enter" our dataset, and "sector leavers" as those who "leave" our dataset and do not return. This means, for example, that teachers who change sectors will be misclassified as leavers and new hires (and also, of course, that leavers do not necessarily leave teaching, as they may move to a different city). These results should therefore be interpreted with caution. For more discussion of these measures, please see the "About the City Profiles."

4   Our data do not allow us to compare leaver rates between sectors, but this has been a consistent research finding. For example, see Stuit, D. A. & Smith, T. M. (2012). "Explaining the Gap in Charter and Traditional Public School Teacher Turnover Rates." Economics of Education Review, 31(2), 268-279.

Teacher leaver rates were the primary force behind changes in the San Francisco teacher workforce. Asian teachers had a teacher leaver rate considerably below other racial and ethnic groups, leading to increases in their share and numbers. This pattern was so strong that it overcame the low rate of new Asian hires, which was below the Asian share of the teaching force. Conversely, the losses in the Black teacher share and numbers were largely a function of higher teacher leaver rates. We were not able to obtain data to assess new teacher hires or leavers in Washington, D.C.

While each city faces its own distinctive challenges to the diversification of the teaching force, the evidence of this study is that every city needs to take seriously both teacher recruitment and hiring, on the one hand, and teacher retention, on the other.

WHAT IS NEEDED IN FUTURE RESEARCH

The nine cities studied here are geographically diverse and range widely in size. The trends among Black and Hispanic teachers that emerge from them cannot easily be dismissed. It is important, nonetheless, to establish just how widespread these trends extend, which can only be done with more accessible data for a larger number of cities. It is just as important to begin the study of the causes of these trends: What educational policies have contributed to the disturbing losses of Black teachers? What can be done to improve the limited gains among Hispanic teachers? And what policies can help put all American schools on the road to the high-quality, diverse teaching forces that all of our students deserve and need?

Recruitment and Retention Programs to Increase Teacher Diversity

(with Joseph Ciesielski, Philadelphia Youth Network)

METHODS AND RATIONALE

A national search, using primarily online tools *and* program websites, was conducted to identify state and local programs that aim to recruit *and* retain minority teachers. Programs were included in this review if they combine recruitment and retention aspects (even if the focus on retention isn't explicit, as with programs 2 and 4 below), have an external evaluation or solid documentation of results, and are still active. Data were collected by reviewing websites, reports, peer-reviewed journal articles, book chapters and independent evaluations. Semi-structured interviews were conducted with program directors and/or staff whenever possible in order to ascertain strengths, challenges and next steps.

In all, eight programs were identified. They are described in the following pages.

1. Boston Teacher Residency
2. Call Me MISTER
3. Grow Your Own Teachers
4. Minority Teacher Identification and Enrichment Program
5. Teacher Quality and Retention Program
6. Teach Tomorrow in Oakland
7. Today's Students, Tomorrow's Teachers
8. Urban Teacher Enhancement Program

1. Boston Teacher Residency

Website: www.bostonteacherresidency.org
Year begun: 2003
Program Type: Fellowship

The Boston Teacher Residency (BTR) program[1] recruits, prepares and retains highly diverse cohorts of teachers with the aim of helping to improve student learning in the Boston Public Schools. Created through a partnership between the Boston Public Schools and BPE (formerly the Boston Plan for Excellence), BTR addresses three major human capital challenges:

- Difficulty recruiting and retaining teachers for math, science, special education and English language learners;

- Difficulty recruiting and retaining minority teachers; and

- A three-year turnover rate of 50 percent for new teachers.

BTR has worked toward overcoming these challenges. As a result, more than half of all BTR secondary teachers teach math or science. All BTR teachers are prepared to teach students with disabilities and English language learners; 40 percent of BTR graduates teach in one of these areas. Roughly half of all BTR graduates are minorities. Since the program's inception in 2003, 77 percent of all graduates placed in Boston public schools are still teaching in the district.

Program Model

Residents engage in 13 months of intensive practice-based coursework tightly integrated with a yearlong residency in a Boston school. Residents work in classrooms with a mentor teacher and teaching team for the full school year, taking on a set of roles and responsibilities designed to contribute to student learning. BTR courses merge theory, research and practice; assignments are designed to make residents grapple with students' academic and socio-emotional needs. Mentor teachers are selected and trained by BPE. After successful completion of their residency year, participants become full-time teachers of record in Boston schools. Each graduating resident must commit to teach for at least three years in the Boston Public Schools. BTR graduates are in high demand; more than 90 percent have been hired by Boston schools, and 97 percent of principals say they would hire another BTR graduate. As teachers, they continue to receive induction support from BTR, including courses, study groups and classroom coaching. The organization also maintains an active alumni network to encourage continuing peer support.

Participants who successfully complete their training and residency receive a master's degree in education from the University of Massachusetts-Boston and a Massachusetts Initial Teacher License. During the residency year, they are provided with a modest stipend. At the beginning of the program, participants are loaned $10,000 toward program fees, with one-third of this loan forgiven for each year that they teach within the Boston Public Schools.

In order to increase teacher diversity, BTR has set the goal that at least 50 percent of each cohort be minority teachers. Such teachers are recruited broadly: through partnerships with organizations such as Breakthrough Collaborative, the Posse Foundation and City Year, at historically Black colleges and universities, and among community and faith-based organizations. BTR also uses its growing network of alumni and partners to refer strong minority candidates. BTR graduates who are minorities also participate in support groups for current teachers and teacher candidates.

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1   The Boston Teacher Residency program was one of three initial Urban Teacher Residency programs. Along with Chicago and Denver, the Boston program was created to provide the training, tools and support for new urban teachers that would help improve performance and reduce turnover. This partnership has since been expanded to become the Urban Teacher Residency United network, which today includes many programs around the country: the Academy for Urban School Leadership Chicago Teacher Residency; the Aspire Teacher Residency Program in Oakland and Los Angeles; the Atlanta Urban Teacher Residency; the Boettcher Teacher Residency in Denver, Durango and San Luis Valley; the Denver Teacher Residency; the Memphis Teacher Residency; the New Visions for Public Schools in New York City; the NYC Teaching Collaborative; the Philadelphia Teacher Residency; Project Inspire in Chattanooga, Tenn.; Project METRO in Milwaukee; the Richmond Teacher Residency in Richmond, Va.; the San Francisco Teacher Residency; the Seattle Teacher Residency; the Twin Cities Teacher Collaborative (TC2) STEM Urban Teacher Residency in Minneapolis and St. Paul; and the University of Chicago Urban Teacher Education Program in Chicago. Although these programs are all tailored to the specific needs of the districts in which they operate, they all share common principles and must meet quality standards and rubrics in terms of program vision; program management; recruitment and selection; mentor recruitment, selection and development; a residency year and a post-residency; and participation in network-wide assessments and evaluations.

Results, Strengths, Challenges and Next Steps

More than 500 BTR graduates teach about 20,000 Boston public school students every year.

The BTR program has been highly successful at retaining teachers in the Boston Public Schools teaching force. Some 80 percent of BTR teachers stay in the district for three or more years, compared with 63 percent of non-BTR teachers, and 75 percent of BTR teachers serve five or more years, compared with 51 percent of non-BTR teachers (Papay et al., 2011). Among minority teachers, 85 percent of BTR graduates stay three or more years, while 74 percent stay five or more years. BTR graduates are also 8 percentage points more likely to be Black and 4 percentage points more likely to be Latino than not-BTR teachers (Papay et al., 2011).

In addition, from 2003 to 2006, overall teacher retention rates past the first year of teaching increased from 71.8 percent to 85.4 percent, while those for minority teachers increased from 73.6 percent to 83 percent (Vom et al., 2009; Solomon, 2009).

Today, BPE is creating a neighborhood-based, preK-12 pathway of schools called Teaching Academies, which are designed to serve as excellent educational institutions for students and families, and to prepare highly effective teachers. Teaching Academies are modeled after the best teaching hospitals, which provide exemplary care for patients and a premier training ground for new doctors. In Teaching Academies, teacher preparation and school development are mutually beneficial and reinforcing. Teaching teams—made up of teachers and residents—take collective responsibility for student outcomes. These educators share a common set of practices and approaches that enable both student and adult learning. In creating Teaching Academies, BPE is working to put student learning—the engagement of all students in rigorous content—at the center of its teacher preparation model.

Finally, BTR has also supported the replication and improvement of the teacher residency model to more than 20 sites nationwide through its partnership with Urban Teacher Residency United (see footnote 1 earlier), and has supported the launch of residency programs in India and Israel.

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2. Call Me MISTER

Website: http://www.clemson.edu/hehd/departments/education/research/callmemister
Year begun: 2000
Program Type: University

The Call Me MISTER (Mentors Instructing Students Toward Effective Role Models) Initiative (also called CMM) was established in South Carolina as a partnership between Clemson University and three historically Black institutions: Claflin University, Benedict College and Morris College. It was designed to increase the pool of Black male teachers available to work in South Carolina's schools, especially the lowest-performing elementary schools. The program has since expanded in both size and mission, being replicated by many more institutions within South Carolina, as well as Florida, Georgia, Kentucky, Mississippi, Pennsylvania and Virginia, with the aim of recruiting a broader, more diverse teaching force of both men and women from an array of minority groups.

Participants are recruited largely from among college students from underserved, socioeconomically disadvantaged and educationally at-risk communities. Participation in Call Me MISTER, however, is open to all, regardless of race, ethnicity or gender. Requirements to receive CMM support include:

- Seeking and receiving admission to a participating Call Me MISTER institution;

- Pursuing a degree that leads to certification at the elementary or middle grades level;

- Meeting all program requirements and expectations, as outlined in the policies and procedures manual; and

- Committing to teaching in an elementary or middle school, within the state of matriculation, for one year for every year of financial support received.

The program provides:

- Tuition assistance through loan-forgiveness programs for admitted students who are pursuing an approved program of study in teacher education at a participating college or university;

- An academic support system to help ensure success;

- A cohort system for social and cultural support; and

- Assistance with job placement.

According to one description: "Students get tuition assistance, but they also get intensive social and academic support at every stage of their teacher preparation. Recruited in cohorts of five to seven, they live and attend classes together and participate in internships and service-learning initiatives" (Hawkins, 2010).

Results, Strengths, Challenges and Next Steps

Clemson's Charles H. Houston Center for the Study of the Black Experience in Education is conducting an evaluation of this program, but data have not yet been released. Some initial data from the South Carolina program have been reported, however. Since 2000, when the program was established, at least 150 CMM graduates have been certified and secured teaching positions. As of March 2014, all program graduates remained in education careers. Some now work as principals or program directors. Another 164 teacher candidates were also enrolled at 17 different colleges and universities (WKKF, 2014). The program's current South Carolina partnership involves 20 schools: 14 four-year colleges and universities and 6 two-year technical colleges. Fall 2015 enrollment is 200.

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3. Grow Your Own Teachers

Website: http://www.growyourownteachers.org
Year begun: 2005
Program type: University/Consortium

The idea behind Grow Your Own Teachers (GYO) was conceived independently by two community groups working in Chicago around 1999. The Logan Square Neighborhood Association partnered with Chicago State University to help classroom aides and school paraprofessionals become certified teachers. At the same time, Action Now realized that much of the teacher shortage in Chicago was due to retention problems, and began to work on initiatives to retain minority teachers.

In 2004, Illinois passed a state law to fund the GYO initiative and combine these two efforts. The goals of the

program are to (1) create a pipeline of highly qualified minority teachers; (2) improve teacher retention in low-income schools; (3) recruit for hard-to-staff schools and hard-to-fill positions; and (4) increase cultural competence and community connections of teachers (Grow Your Own, 2012). The program was initially administered by the Illinois State Board of Education; in fiscal year 2011, it was transferred to the Illinois Board of Higher Education (IBHE). The funds received from the state are administered and distributed by IBHE. Grow Your Own Illinois is a separate nonprofit organization that coordinates the work across the state. There are currently 11 GYO consortia in Illinois, six of which are in Chicago. Each consortium consists of a community organization, a school district and a four-year college. Most also have community college partners.

Community organizations already working in neighborhoods recruit potential teachers for the program and provide leadership development training for participants, who work toward a full teaching certification at the university participating in the consortium. Funding support for the program provides loans to participants for their degrees that are forgivable after five years of teaching in a high-needs school or in a high-needs position. It also pays for child care, transportation and other necessities candidates may have to complete the program.

Candidates receive two years of mentoring support after they begin teaching. They also participate in professional development seminars with other members of their cohort during that time.

Program participants are typically nontraditional candidates. About 57 percent of candidates are between the ages of 30 and 50, 69 percent are employed full time outside of the program, and 66 percent have dependents. More than half of the candidates have family incomes below $30,000 annually. Fifty-two percent already work in schools in other capacities (e.g., as paraprofessionals), and 16 percent are parent volunteers (GYO Fact Sheet, 2013).

In line with GYO's mission, approximately 87 percent of candidates are minorities; 48 percent are Black and 34 percent are Latino (GYO Fact Sheet, 2013).

Results, Strengths, Challenges and Next Steps

As of August 2015, GYO had graduated 112 candidates, 72 percent of whom are teaching in low-income schools in Illinois. There are 166 candidates currently in the program, working on their certification, and the average GPA of candidates is 3.2 (GYO Fact Sheet, 2014).

A study in 2012 of 22 individuals who graduated from the program (which was 77 percent of those teaching at the time) found generally positive results of the program, including teachers having a strong sense of shared identity with students, teachers feeling well prepared and relating well to students, and a belief that few of the participants would have become teachers if the program did not exist (Grow Your Own, 2012).

Because a majority of those currently teaching have only recently begun teaching, there is a lack of data about retention thus far. Anecdotally, principals who hire GYO teachers report that they have a higher retention rate than other teachers.

A main strength of the program is the community base. The program serves as a catalyst to partnerships between communities, community organizations and institutions of higher education. Faculty at the universities develop relationships with schools in the community and are more likely to visit these schools or send other students to them for practicum experiences.

A major challenge reported by the program is similar to that of other programs that aim to attract and retain nontraditional minority students and to see them through to graduation. GYO reports that the academic hurdles common to students who have been out of the classroom for years (sometimes decades) and the inevitable struggles associated with balancing very full lives with a rigorous education program sometimes result in participants exiting the program.

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4. Minority Teacher Identification and Enrichment Program

Website: http://www.eiu.edu/~mtiep
Year begun: 1993
Program Type: University

The Minority Teacher Identification and Enrichment Program (MTIEP) has been helping to recruit and provide support to minority teacher candidates for more than 20 years. Begun by a professor at Eastern Illinois University to provide academic and social support services to minority students at the university, the program quickly evolved into a multi-campus effort to recruit and retain prospective minority teachers for the entire state of Illinois.

The program's first component is university based. Once in college, students are encouraged to pursue teacher education and are provided with the opportunity to interact with education professors and other teacher-education candidates. The program provides needed supports to motivate and keep the minority students pursuing a career in education, as well as mentors and other resources.

MTIEP's goals are to:

- Motivate minority students to apply to and attend institutions of higher education;
- Improve transfer articulation with education programs;
- Provide minority students with appropriate role models;
- Improve minority students' basic literacy, mathematics and computing skills;
- Improve minority student retention;
- Increase the state's pool of minority teachers; and
- Enhance the effectiveness of potential and current minority teachers.

The program's second component is outreach to high school students interested in the field of education. Working with cooperating high schools, the program sponsors a summer program that introduces the field of teaching to minority high school students who are in the top 10 percent of their class. The summer program works with Eastern Illinois University's Golden Apple Scholars, recipients of an Illinois college scholarship program that works to develop and support teachers for high-need schools. These preservice educators serve as mentors, offering guidance, tutoring services, tips on study skills, ACT prep and much more.

Results, Strengths, Challenges and Next Steps

Although the program is more than two decades old and appears to be firmly established, the number of certified teachers it has helped to produce is comparatively modest. A 2005 report described MTIEP as spanning "one university, thirty-nine community colleges, twelve high schools, six middle schools, and two elementary schools." According to its website, more than 7,000 minority students have participated in the program since its inception. Of these, 133 students have successfully completed teacher-education programs, become certified and are currently teaching in Illinois schools.

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5. Teacher Quality and Retention Program

Website: http://tmcf.org/our-programs/k-12-education/teacher-quality-retention-program
Year begun: 2009
Program Type: Fellowship

The Teacher Quality and Retention Program (TQRP) is a signature program of the Thurgood Marshall College Fund, a nonprofit organization that provides support to the nation's 47 publicly supported historically Black colleges and universities (HBCUs). TQRP is a competitive fellowship program with the goal of recruiting, supporting and retaining HBCU students and graduates who are ready to teach in underserved urban and rural communities. All education majors are welcome to apply, but the primary focus is candidates who are STEM (science, technology, engineering and mathematics) education majors, K-6 generalist education majors who are concentrating on a STEM subject, and HBCU male education majors. The program also recruits STEM majors interested in working as math and science teachers.

TQRP is a five-year, year-round professional development opportunity, which requires its fellows to:

- Participate in an intensive, all-expense-paid (plus stipend), two-week summer institute;

- Engage in interactive webinars throughout each school year; and

- Make progress on an individualized action plan that is co-designed with TQRP staff.

At the institute and beyond, fellows have opportunities to attend outside professional conferences, participate in additional virtual support, and obtain mentorship and teacher-leadership training. They also receive job-placement assistance via a recruitment fair during the summer institute.

Results, Strengths, Challenges and Next Steps

Using a pre- and post-assessment questionnaire for fellows in the 2014-15 cohort, there was a substantial increase in ratings from fellows in all six summer institutes except one, the new teachers institute at Texas Southern University (Armour-Thomas, 2014). To act on many of the recommendations in the 2014-15 cohort, TQRP moved to a single institute model in the summer of 2015.

Since 2009, TQRP has graduated teachers who serve more than 1,500 students every year in urban and rural schools in at least 13 states, the District of Columbia and the U.S. Virgin Islands. Of the 2014-15 cohort, which is the most recently studied in TQRP's annual external evaluation, 51 percent are Black males and 46 percent are in STEM fields. According to an internal survey conducted in late 2014, some 89 percent of former TQRP fellows indicated that they intended to remain in teaching, and 24 percent have become teachers of the year, content-area lead teachers, grade-level lead teachers, department chairpersons or school administrators. In addition, 42 percent of the 2014-15 cohort who have bachelor's degrees are enrolled in advanced-degree programs (Feight Rowe, 2015).

TQRP provides targeted, research-based training on best practices *before* fellows enter the classroom, and then continues the support until *after* their third year as teachers of record. TQRP uses the expertise of such partners as the UTeach program at the University of Texas at Austin, the National Board for Professional Teaching Standards and the 100Kin10 national network, as well as current classroom teachers who serve as the program faculty and mentors. TQRP's success lies in its ability to guide fellows along the continuum from pre-service to novice to teacher leader, all with the ultimate goal of retaining these talented and dedicated individuals in the profession for the long term.

Sources

Armour-Thomas, E. "An evaluation of TMCF Teacher Quality and Retention Program's STEM summer institute." 23 Oct. 2014.

Thurgood Marshall College Fund (2015). "Teacher Quality & Retention Program: Overview." Retrieved from http://tmcf.org/wp-content/uploads/2015/07/TMCF-TQRP-2015.pdf.

6. Teach Tomorrow in Oakland

Website: http://www.teachtomorrowinoakland.net
Year begun: 2008
Program Type: Alternate Route

Teach Tomorrow in Oakland (TTO) is a teacher recruitment and development program that aims to place teachers who reflect the diversity of the local student population. The program is the result of a grass-roots movement to diversify the Oakland Unified School District (OUSD) teaching workforce and a strategic partnership with former U.S. Rep. Ronald Dellums. The program recruits OUSD alumni, community members, middle and high school students, paraprofessionals, out-of-industry professionals and student teachers who value education, growth and educating Oakland youth. TTO provides educational and financial support for qualified TTO cohort members looking to successfully complete the California state credentialing requirements and commit to teaching within OUSD.

Participants attend qualified, accredited university programs from May to July for pre-service training and then attend an intensive six-week training before being placed as teacher interns in August. During their intern year, participants function as a teacher of record while taking classes to earn certification. TTO provides tutoring, professional development and classroom resources throughout the program.

Participants are often recruited from the communities in which the program hopes to place teachers. Funding comes from federal grants and district support. Participants make a five-year commitment to teach in Oakland or pay back the tuition assistance they received.

Results, Strengths, Challenges and Next Steps

As of fall 2013, TTO had placed a total of 112 teachers, 25 of whom left teaching, giving the program a retention rate of 78 percent. The program has retained an even higher percentage of minority teachers: 86 percent. According to one examination of the program, the five-year commitment may account for as much as 50 percent of the reason teachers remain in the classroom. Despite this high retention rate, structural challenges remain. In particular, minority teachers often report feeling isolated. TTO attempts to provide supports to combat this isolation. First, the cohort model creates a sense of shared experience and allows teachers to connect with each other. Second, senior TTO teachers lead monthly professional development sessions with newer cohort members, providing an opportunity for leadership development. Finally, TTO provides leadership sessions for teachers in their third through fifth years, in which teachers come together to share best practices and hold each other accountable (Rogers-Ard & Lynch, 2014).

Sources

Bireda, S. & Chait, R. (Nov. 2011), "Increasing Teacher Diversity Strategies to Improve the Teacher Workforce," Center for American Progress. Retrieved from http://cdn.americanprogress.org/wp-content/uploads/issues/2011/11/pdf/chait_diversity.pdf.

Rogers-Ard, R. & Lynch, K. M. (2014). "Teach Tomorrow in Oakland: History, Teacher Profiles, and Lessons Learned," *Diversifying the Teacher Workforce: Preparing and Retaining Highly Effective Teachers*, 32.

7. Today's Students Tomorrow's Teachers

Website: http://www.tstt.org
Year begun: 1994
Program Type: Eight-Year Teacher Pipeline

Today's Students Tomorrow's Teachers (TSTT) is a career development and mentoring program that recruits and trains culturally diverse, economically challenged high school students for college and a rewarding teaching career. TSTT was designed to address the growing shortage of teachers, particularly minority teachers. Upon receipt of teacher certification, TSTT participants pledge to return to the classroom as teachers and role models in their communities.

In 2012, TSTT was selected by the Social Impact Exchange as a charter member of the S&I 100, an index of 100 U.S. nonprofits making a measurable social impact. It has also received recognition from the U.S. Department of Education for its successful career partnership model and was cited as "an innovative program that embodies many of the goals and objectives for educational excellence and should serve as a model for other regions in the nation."

TSTT supports nearly 50 high schools and more than 800 students in four states (Connecticut, Massachusetts, New York and Virginia). More than 150 TSTT program graduates are now serving as teachers and role models in their communities. The makeup of those graduates is 47 percent Black, 4 percent Asian, 13 percent White, 32 percent Hispanic and 4 percent "other". Additionally, 24 percent of students were male, 90 percent received free or reduced-price lunch, and 75 percent were first-generation college students.

The program works with local school districts to identify potential participants. High school freshmen apply and are interviewed by a selection committee comprised of local educators and school leaders. After acceptance, each student is assigned a teacher mentor.

The program requires that high school students achieve a B+ average by their senior year. They are required to tutor two hours per week and participate in a 20-hour-per-week summer internship. Students meet weekly with peers in the program, their TSTT program manager and their high school teacher mentor.

TSTT employs what is described as a "full circle," research-based, eight-year teacher preparation model that provides supplemental instruction to train young people as teachers.

TSTT partners with 25 colleges, which agree to forgive a portion of students' tuitions if they receive teacher certification. There is a bridge program that provides support when TSTT participants enter college. Sixty percent of students who participate in the TSTT program in high school attend partner colleges. In college, TSTT participants are partnered with a mentor, receive continuous counseling and remain connected with their home schools through internships and substitute teaching. Participants also receive teacher-preparation training at two full-day workshops with customized TSTT syllabi. TSTT also assists with the job search and placement process, including mock interviews.

TSTT asks participants to agree to teach in their home district for at least one year; about 70 percent of participants follow through with this commitment.

Results, Strengths, Challenges and Next Steps

According to an independent evaluation released in 2010 (Cooper & Spielhagen, 2010), 102 students had completed the eight-year program and were teaching. Seventy-five percent of TSTT students in college had participated in the program for 4-6 years, indicating that students were successfully being recruited early on and being retained in the program. Respondents to a survey indicated that they found value in the mentoring and tutoring program, and gained confidence in their ability to be educators from these components. Also, 100 percent of respondents who had completed the program and were teaching reported that they are committed to remaining in the teaching profession.

TSTT reports that 70 percent of participants have received a college degree. According to data provided by the program, only 7 percent of TSTT teachers had left teaching by three years and 10 percent by five years.

TSTT is working on developing and implementing professional development trainings for participants who are currently teaching. It has also begun to offer professional development for mentors.

TSTT has also launched a Male Teacher of Color Initiative, which seeks to recruit a cohort of minority male students, particularly Black and Hispanic males, to consider the teaching profession.

TSTT is in the early stages of conducting a longitudinal study to assess the program's impact on participants and the hundreds of thousands of students they teach, and is seeking to partner with national or regional research organizations to assist in this evaluation process.

Sources

Cooper, B. & Spielhagen, J. (2010). "Today's Students Tomorrow's Teachers: Program evaluation," Fordham University: New York, NY. Retrieved from: http://www.tstt.org/images/Program%20Evaluation_2010.pdf.

Perkins, B. H. (2003). "Today's students, tomorrow's teachers: A new regional collaborative precollegiate minority teacher recruitment model." Retrieved from http://fordham.bepress.com/dissertations/AAI3084914/.

8. Urban Teacher Enhancement Program

Website: http://www.uab.edu/education/cue/current-projects/urban-teacher-enhancement-program
Year begun: 2004
Program Type: Tuition Support

The Urban Teacher Enhancement Program (UTEP) is a teacher preparation program designed to recruit, prepare and retain those interested in teaching in urban areas. It is an initiative of the University of Alabama at Birmingham (UAB) Center for Urban Education and is supported by grants from the U.S. Department of Education.

Developed and implemented in collaboration with local partner districts, UTEP actively recruits applicants among education students, second-career seekers and school paraprofessionals. Participating students receive tuition support for teacher-education coursework. Other features include coursework infused with competencies that have been validated as essential elements to urban teaching, coursework co-taught by university faculty and master teachers from the partner districts, enhanced field placements and mentorship from current and recently retired master teachers and administrators in the participating school districts and from UAB School of Education faculty liaisons.

Results, Strengths, Challenges and Next Steps

UTEP has a selective screening process. It only accepts candidates who are already accepted into the undergraduate teacher-education program at UAB or an alternate route or traditional master's degree program. According to reports, UTEP has been remarkably successful, with 90 percent of participants receiving state teacher certification (Hunt et al., 2012).

UTEP has a three-year teacher retention rate of approximately 70 percent; that is, the participants taught three or more years in a qualifying school or district. Roughly 70 percent of UTEP fellows are Black. In short, the program has helped to meet partner districts' need for minority teachers (Bireda & Chait, 2011). While UTEP's data indicate that the majority of participants remain in the classroom, a small but growing number of alumni are assuming leadership roles within schools, districts and learning-related entrepreneurial ventures.

Center for Urban Education records show that many UTEP participants have been recognized for their knowledge and appreciation of the unique cultures within urban schools; possessing real-world conviction that highly prepared teachers can enhance the learning of all students; having a commitment to the ethic of collaboration; believing and practicing resilience inside and outside the classroom; and understanding the significance of being a lifelong learner.

Final grant and Center for Urban Education reports underscore initial UTEP challenges related to K-12 budget cuts and reorganization priorities that adversely affected many of the participants' ability to find employment or remain within the school districts, particularly those who were not certified to teach in the high-needs areas of mathematics, science and special education. The program itself is also struggling to locate and secure sufficient grant funding, and is exploring collaborative ventures that could further its mission. Most recently, the center developed a lecture series that addresses an array of critical educational and social issues, such as educating and supporting Black male students, co-sponsored by the university's School of Medicine and Office of Diversity and Multicultural Affairs.

Sources

Bireda, S. & Chait, R. (Nov. 2011), "Increasing Teacher Diversity Strategies to Improve the Teacher Workforce," Center for American Progress. Retrieved from http://cdn.americanprogress.org/wp-content/uploads/issues/2011/11/pdf/chait_diversity.pdf.

Hunt, E. et al. (Oct. 2012). "Illinois Grow Your Own Teacher Education Initiative: 2011-2012 Policy and Program Recommendations." Retrieved from http://www.ibhe.org/Grants/PDF/GYO/GYO%20Annual%20Report_2012.pdf.

SECTION VI:

Policy Recommendations

FEDERAL GOVERNMENT:

- **As part of its Civil Rights Data Collection, the U.S. Education Department should collect and report data on the race and ethnicity of the teaching force in all public schools, district and charter.**

  According to the U.S. Education Department, the purpose of its Civil Rights Data Collection (CRDC) program is "to obtain data related to the nation's public school districts and elementary and secondary schools' obligation to provide equal educational opportunity. To fulfill this goal, the CRDC collects a variety of information, including student enrollment and educational programs and services data that are disaggregated by race/ethnicity, sex, limited English proficiency, and disability."

  On the principle that students of disadvantaged racial and ethnic groups must have equitable access to qualified and experienced teachers, the CRDC collects teacher-level data on certification and licensure, years of experience and current salary. It does not, however, collect any data on teacher diversity.

  Research suggests that access to a diverse teaching force directly affects the quality of education that all students receive, but especially students belonging to disadvantaged racial and ethnic groups. Thus, arguably, data in regard to teachers' race, ethnicity and gender, within and among schools, are as much a measure of "teacher equity" as the measures that are currently being collected.

  Given its historic commitment to securing students' civil rights, and its unique authority to collect and report civil rights-related data, the U.S. Education Department should begin collecting teacher diversity data as quickly as possible. Further, these data should be transparent and easily accessible for public scrutiny and review.

STATE GOVERNMENT:

- **State educational agencies must ensure the accuracy and integrity of the data they collect from all public schools, district and charter—including data on the race and ethnicity of teachers—and they must fulfill their legal responsibilities to make that data available to the public.**

  The difficulties we faced in obtaining full and accurate public documents on teacher diversity from several state education agencies are detailed in the Data Appendix of this report. Freedom of information laws in different states were established precisely for the purpose of ensuring that the public has access to public documents that government agencies might be reluctant to disclose. State educational agencies must fulfill their obligations under these laws.

- **Governors, state legislatures and state departments of education should review education-related legislation and policy for their impact on teacher diversity, and amend or modify them to promote diversification and avoid the unintended consequence of diminishing diversity.**

  New Orleans is one of the cities in this report that has experienced an immense decline in the share and numbers of Black teachers in its public schools. State legislation and policy that dramatically transformed the public schools of New Orleans in the wake of Hurricane Katrina—particularly the mass termination of the entire pre-Katrina teaching force—clearly played a role in that decline. However, the impact of state legislation and policy on teacher diversity is not usually so direct or self-evident. Further research should be done to establish the diversity effects, positive and negative, of particular laws and policies. Governors, state legislatures and state departments of education need to support that research and take its findings into account in their decision making.

BOTH FEDERAL AND STATE GOVERNMENT:

■ **To increase the number of highly qualified minority teachers—and particularly Black, Hispanic and American Indian teachers—entering the profession, the U.S. Education Department and the state departments of education should invest in and support high-quality teacher education programs at historically black colleges and universities (HBCUs), the nation's Hispanic-serving institutions (HSIs), tribal colleges and universities (TCUs) and public colleges and universities serving large numbers of minority students.**

■ **To ensure that novice teachers are well prepared to enter the classroom and receive the mentoring and support they need to be successful, the U.S. Education Department and the state departments of education should establish incentives for close partnerships between colleges of education, on the one hand, and school districts and charter networks, on the other hand. Particular attention needs to be paid to providing adequate mentoring, support and training in culturally responsive practices to novice teachers—of all races and ethnicities—working in the challenging conditions of high-poverty, de facto racially segregated schools.**

■ **To both increase the number of minorities who are well prepared to enter the teaching profession and ensure that novice minority teachers receive the mentoring and support they need to be successful and remain in teaching, the U.S. Education Department and the state departments of education should support the development and expansion of programs with evidence of helping to recruit, mentor and support minority teachers, such as those described in Section Vof this report.**

■ **To increase the numbers of Black and Hispanic teachers who are well prepared to enter the profession, the U.S. Education Department and the state departments of education should support "grow your own" teacher preparation programs and career ladders for educational aides and paraprofessionals seeking to become teachers.**

LOCAL SCHOOL DISTRICTS AND SCHOOLS:

In the main, the policies and practices that have the greatest impact on the diversity of a teaching force are determined at the local level, not at a state capitol or in Washington, D.C. Certainly, the primary levers for diversification of the teaching force—the recruitment, hiring and placement of new teachers, and supports for teachers that can help reduce rates of attrition—are the province of school districts and schools.

■ **School districts and schools, working collaboratively with local teacher unions and community, need to develop strategic plans for the diversification of their teacher workforces. These plans should include specific actions that will be taken and programs that will be developed and supported to improve teacher diversity in all schools, with a particular focus on the educational needs of students from disadvantaged minority groups, especially Black and Hispanic youth.**

■ **School districts, charter schools and teacher unions should use contract negotiations as a vehicle for increasing teaching diversity, incorporating programs and features, such as paraprofessional career ladders, that serve to increase teacher diversity.**

■ **Accountability systems for schools and evaluation systems for administrators with authority over teacher recruitment and hiring should include measures of how recruitment and hiring practices have affected teacher diversity. Evaluation systems for district and school leadership should also include measures of teacher retention and attrition and how these trends have affected teacher diversity.**

The institutional arrangements for the recruitment and hiring of new teachers vary across different school districts and charter schools, with varying responsibilities accorded to human resources departments, school principals and school staffs, depending on the district or charter network. Whatever the particulars, systems of accountability for the leadership and staff of school districts and charter networks must include the effect of recruitment and hiring practices on teacher diversity, as appropriate.

- **Urban school districts, district schools, charter networks and charter schools should develop close partnerships with colleges of education to ensure that an increased supply of well-qualified Black and Hispanic teachers are prepared to teach in city schools.**

- **School districts, district schools, charter networks and charter schools should work to develop and support programs for the recruitment and support of new Black and Hispanic teachers, such as those described in Section V of this report.**

DATA APPENDIX

Section 1: Acquisition of Teacher-Level Data

Beginning in February 2014, the Albert Shanker Institute (ASI) submitted public information requests to eight school districts,[1] seeking administrative teacher-level datasets that included the race/ethnicity, school, sex, experience, salary and certification of every teacher that was employed by the school districts during the years 2002 to 2012.[2] The requests asked that teachers have a unique identifier (devoid of teachers' personal information) to allow us to track them across years. In June 2014, ASI requested the same data from charter schools within the city limits of each district from which ASI had requested data in February. At this point, the requests included a ninth city, New Orleans, where charter schools currently constitute virtually all of the city's public schools. Requests for data on charter school teachers were sent to the respective state departments of education.[3]

Out of the 19 agencies initially contacted for this project, ASI received the most positive responses from the Boston Public Schools, the Massachusetts Department of Education, the Cleveland Metropolitan School District, the Ohio Department of Education, the New York City Public Schools, the School District of Philadelphia, the Pennsylvania Department of Education, the Chicago Public Schools, the Illinois Department of Education and the San Francisco Unified School District. Overall, responses from these agencies were timely,[4] and they were substantially responsive to our request.[5] Moreover, while agencies are permitted to charge for the direct costs of compiling and/or producing public documents, these agencies waived all costs, with the exception of the San Francisco Unified School District, which charged a minimal fee.[6]

In contrast, the New York State Education Department (NYSED) and the Los Angeles Unified School District (LAUSD) both required that ASI pay significant fees to the agencies before they would release the public documents. NYSED originally invoiced ASI $1,115, and a check was sent for that amount. Months later, and after inquiries as to when the documents would be provided, NYSED decided that it only cost $520, and that the process needed to start anew with a new check, which delayed ASI's acquisition of the data, impeding the project's overall progress. When the dataset finally arrived from NYSED, it was unusable for ASI's purposes, as approximately 45 percent of the observations in the race and ethnicity variable (a key variable in the study) were missing or invalid. In the other datasets that were provided to ASI, missing and invalid observations (for race and ethnicity) range from 0 to 14 percent and amount to about 1 percent across all cities.

While LAUSD did provide ASI with the data requested, the district charged $2,700 for the production of documents. In addition, the information was provided in PDF format, which required considerable additional work to convert into a format suited for statistical analysis.

ASI also encountered difficulty in obtaining information in a timely manner from the Recovery School District in New Orleans. Section 44:32(D) of the Louisiana Public Records Act requires a response to all requests for public information within three business days. ASI initially submitted its public information request to the Recovery School District on June 2, 2014. After receiving no response, ASI contacted the Recovery School District in September to inquire whether the district received our initial inquiry. The district replied that it had not, but

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1. Public information requests were sent to the following school districts: Boston, Chicago, Cleveland, Los Angeles, New York City, Philadelphia, San Francisco and Washington, D.C.

2. While these were the years for which we officially requested data from all state and city agencies, some sent additional years (e.g., Cleveland send 2000-2001 as well) and many sent fewer years, claiming that these were the only ones available. The years for which we present results in each city are noted in a summary table at the beginning of each city profile. Additional details are provided in Section 2 of this Appendix.

3. In Washington, D.C., public requests for data on charter school teachers were submitted to the Office of the State Superintendent of Education and the District of Columbia Public Charter School Board. In New Orleans, requests were sent to the Orleans Parish School District, the Recovery School District and the Louisiana Department of Education.

4. Generally, public information laws oblige public agencies to respond within a reasonable or specified amount of time. See, e.g., Cal.Gov.Code § 6253(c); DC Code §§ 2-532(c-d); 5 Ill. Comp. Stat. Ann. 140/3(d); La.Rev.Stat.Ann. § 44:32(D); N.Y. Pub. Off. Law § 89 3(a); Ohio Rev. Code Ann. § 149.43)B)(1); Mass. Gen. Laws Ann. ch. 66, § 10(b).

5. Some agencies were not able to provide older data, as the information requested was only collected in recent years.

6. See, e.g., Ohio Rev. Code Ann. § 149.43(B)(1); Mass. Gen. Laws Ann. ch. 66, § 10(a); 5 Ill. Comp. Stat. Ann. 140/6; Cal. Gov't Code § 6253.9(b).

instructed ASI to forward its inquiry to the Louisiana Department of Education. On Sept. 15, ASI contacted the Louisiana Department of Education via phone and email with its request. ASI sent several follow-up inquiries requesting the status of its public information request throughout the month of October. ASI received no replies to the said inquiries. On Oct. 22, ASI informed the Louisiana Department of Education that it intended on pursuing legal action if the department continued to refuse to comply with its statutory obligation. The department replied that the request should have initially been handled by the Recovery School District. The department also attributed the slow response to the Recovery School District's turnaround in new staff. In January 2015, seven months after ASI's initial request, the Recovery School District provided the requested documents.

The California Department of Education (CDOE) responded negatively to the ASI request for public documents for Los Angeles and San Francisco charter schools, answering that the agency "did not have in [its] possession responsive records related to [ASI's] request. ASI found public datasets[7] with the requested variables, with the important exception of unique teacher identifiers, which impeded a full analysis in the Los Angeles charter sector.

ASI received the most negative response from the agencies contacted in Washington, D.C. The first request for information was sent to D.C. Public Schools (DCPS). DCPS initially responded that it did "not have a document that list the salaries of all employees from 2002-2012 and can only provide information captured at a time certain." ASI clarified that it would accept datasets that included any of the information originally requested (i.e., race/ethnicity, school, sex, experience, salary and certification of teachers). In its second response, DCPS again stated that it did not have a document that listed the salaries of employees. ASI appealed DCPS's responses to the mayor of D.C. In response to ASI's appeal, DCPS stated that the agency did not have any of the requested data. Instead, DCPS advised ASI to contact the D.C. Department of Human Resources (DCDHR) for the requested information. ASI withdrew its appeal to the mayor with the understanding that DCDHR would be able to provide the requested public information.

DCDHR was cooperative and timely responded to ASI's request. The documents provided, however, did not contain data on all of the teachers employed with DCPS during the school years 2002-03 to 2011-12. Before providing the information, DCDHR acknowledged there would be missing data, as much of the data on DCPS teachers was lost when the agency obtained a new software system to store personnel data. DCDHR could not guarantee that all of the information requested would be provided for the years prior to the switch to a new software data retention system.

ASI then requested the datasets from the D.C. Office of the State Superintendent of Education (OSSE). OSSE provided the documents, however, no data predating 2007 was provided. Most importantly, the documents did not contain unique identifiers for teachers, which impeded tracking teachers across years, a key aspect of ASI's analysis. OSSE provided the same response when ASI requested the datasets on teachers in D.C. charter schools. ASI will be pursuing all legal options available to obtain the documents requested.

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7. California Department of Education: http://www.cde.ca.gov/ds/sd/df/filesstaffdemo.asp.

DATA APPENDIX

Section 2: Additional information on samples and sources of data

TEACHER DATA

The primary task of this project was the acquisition and preparation of data on teacher race and ethnicity, as well as other variables, in both district and charter schools located in nine cities, from 2002 to 2012. In the end, we procured 16 datasets pertaining to teachers, most of them teacher-level administrative datasets, which were provided, with varying difficulty and speed as described in the previous section, by state and district education agencies, as well as several school-level and district/sector-level datasets containing variables on student characteristics.

We sought to obtain teacher-level data that included the following variables: a unique teacher identifier that allowed matching teachers across years, teacher ethnicity and school. Other teacher characteristics, such as gender, experience and certification, were also requested, but with mixed results. This limited the scope and sophistication of our analysis.

As is often the case with administrative datasets, there were inconsistencies within and between sectors. The following are the core issues that had to be addressed, along with descriptions of how we approached them, in general terms. Further city/sector-specific details are available in the table below.

1. **Year:** Throughout this report, year refers to the first year (fall semester) in the school year. For example, 2001 refers to the 2001-02 school year.

2. **Coding of race and ethnicity:** Race and ethnicity classifications varied across city/sectors and, in many cases, over time within city/sectors. We decided to recode all classifications into the following categories: White, Black, Hispanic, Asian, American Indian, Multiracial and Invalid/Missing. All categories except "Multiracial" were generally available in all years and city/sectors, although, in some cases, they were provided in more disaggregate form—for example, Asians and Pacific Islanders are both recoded into the "Asian" category. In a small group of city/sectors, the race and ethnicity classification included an "Other" and/or "Decline to State" category. We coded these observations as missing, but the frequencies were in all cases minimal (a fraction of 1 percent). Finally, there are cases in which individual teachers alter their self-identifed race or ethnicity over time. We did not change these responses. Details on the specific categories provided by each city and sector are in the table below.

3. **Job titles:** Some of our datasets (see the table below) included only teachers—i.e., those employees that the data source classified as teachers. In most cases, however, our datasets included job titles that did not fit the "traditional" definition of teachers, including administrators, specialists, trainers and similar job types. Our approach was to retain only classroom teacher job titles and eliminate the others from the datasets. It is possible, if not likely, that the classification of teachers as we define the term varies between (and perhaps within) datasets. We did everything we could to check and ensure comparability, but we acknowledge the inevitable possibility that classification error remains.

4. **District office employees:** In most of our datasets, a small group of teachers are coded as employed not in a school but rather in a district (or other type of administrative) office. This might include teachers whom we want to retain, such as those who rotate between schools. It might, however, also include teachers who work in nonclassroom settings, whom we would want to exclude. In those cases where we could not determine the "nature" of teachers' assignments, we decided to retain them. In general, their numbers are very small and do not affect our results. These retained teachers, however, are excluded from any results that rely on the school-level student characteristics data (e.g., Figure 9 in the city profiles), since these variables generally are not available for district offices.

5. **Full-time/part-time status:** In a few cases, data sources provided information on whether teachers were full or part time (e.g., full-time equivalent rates). With the exception of Chicago, where part-time teachers were not included in the data for the first years of the dataset (and were therefore excluded from all years), we did not use this information in our data preparation or analysis. Each observation in the dataset is counted as one individual, regardless of the individual's employment status.

6. **Duplicates:** Duplicate observations, which might, for example, be due to teachers who teach at multiple schools, were eliminated from all teacher-level datasets.

STUDENT DATA

As part of our results, we employ/present two different types of data on students in our nine cities:

1. **Sectorwide student race and ethnicity distributions and total enrollment:** Student race and ethnicity distributions are presented, by year, for each city and sector in the city/sector data tables, and these distributions are also used in the creation of Figures 1 and 5 in the city profiles. In some cities and sectors, the set of schools included in the student race and ethnicity distributions may be different from the set of schools included in the teacher-level data. Sources of these sectorwide student data vary between and, in some cases, within cities; information on these sources is available in the table below.

2. **School-level percent of students eligible for free and reduced-price lunch (FRL), and the percent of students who are Black or Hispanic (or minority):** Average school-level estimates for these two variables are merged into our teacher-level datasets, and they are presented in the form of year-by-year teacher averages in the master data tables for each city and sector (the estimates are also used to generate Figure 9 in the city profiles). Needless to say, these variables are not procured or merged in those sectors for which we do not have teacher-level data. In the sectors for which teacher-level data are in fact available, information on the sources of the merged school data is available in the table below. In all but three of the city/sector combinations, the school data are from the National Center for Education Statistics (NCES). In the case of two of these exceptions—Los Angeles and San Francisco district schools—we chose to use school FRL data from the California Department of Education instead of NCES, as the latter estimates exhibited highly unusual year-to-year fluctuations and data were missing in multiple years. In the case of the third exception—New York City district schools—we used data from the New York City Department of Education, primarily because the department provided the data required. Finally, in these three cities—Los Angeles, San Francisco and New York City—this variable is the percent of students who are minorities (i.e., not classified as white), as these are the cities in which we also focus on Asian teachers, given their relatively high representation in the teacher workforces.

INFORMATION ON CITY/SECTOR DATASETS

District and sector	Years	Data type	Sample restrictions	Notes on teacher race and ethnicity variable[1]	Data sources	Other notes
Boston District	2001-2011	Teacher level	None	Separate category for "Hawaiians" coded as "Asian." All years: W, B, H, A, AI.	Teacher-level data from the Boston Public Schools. School-level data from NCES. Sectorwide student data from the Massachusetts Board of Education.	
Boston Charter	2007-2011	Teacher level	None	All years: W, B, H, A, AI, M.	Teacher-level data from the Massachusetts Department of Education. School-level data from NCES. Sectorwide student data from the National Alliance of Public Charter Schools.	
Chicago District	2002-2011	Teacher level	Part-time employees do not appear in the ISBE dataset in some years, and so we limited the sample to full-time teachers only. From among the many jobs included in the ISBE dataset, the following job titles are retained: elementary teacher, high school teacher, junior high/middle teacher, kindergarten teacher, prekindergarten teacher and special education teacher. An additional assignment variable is then used to eliminate from the dataset the following primary assignments: librarian/media specialist, guidance counselor, curriculum specialist, class size reduction, administration, psychologist, student dean and social worker.	Observations with value of "Other" on the race and ethnicity variable are recoded as missing. 2002-2009: W, B, H, A, AI. 2010-2011: W, B, H, A, AI, M.	Teacher-level data from the Illinois State Board of Education. School-level FRL data from NCES. Sectorwide student data from the Chicago Public Schools.	The ISBE dataset does not include unique teacher identification numbers. We therefore linked teachers between years using a combination of their names and the colleges from which they received their bachelor's degrees. Despite our efforts, it is possible that this process generated errors. On the other hand, it also permits our tracking teachers who switch between sectors. In addition, the ISBE dataset includes only certified teachers. This may create incomparability to the degree teacher race and ethnicity varies by certification.

District and sector	Years	Data type	Sample restrictions	Notes on teacher race and ethnicity variable[1]	Data sources	Other notes
Chicago Charter	2008-2011	Teacher level	Charter school data are only available in the ISBE dataset beginning in 2008. *Also see notes for Chicago District.*	Observations with value of "Other" on the race and ethnicity variable are recoded as missing. 2008-2009: W; B; H; A; AI. 2010-2011: W; B; H; A; AI; M.	Teacher-level data from the Illinois State Board of Education. School-level data from NCES. Sectorwide student data from the Chicago Public Schools.	There is a rather substantial jump in invalid race and ethnicity responses in 2011. This is due to a large number of charter subsample responses coded "NULL" in the ISBE dataset. It is possible that it affected our charter sector results. There is a very low match rate on the school-level FRL variable from 2008 to 2010. These estimates are therefore suppressed in the city/sector data tables, as well as in Figure 9 in the Chicago city profile. *Also see notes for Chicago district sector.*
Cleveland District	2000-2011	Teacher level	The following job titles are removed from the dataset: department chair, juvenile court representative, peer review liaison and peer coach.	Observations with value of "Other" are coded as missing. 2000-2007: W, B, H, A, AI. 2008-2011: W, B, H, A, AI, M.	Teacher-level data from the Cleveland Metropolitan School District. School-level data from NCES (2007 FRL data are missing for the entire state of Ohio). Sectorwide student data from NCES.	
Cleveland Charter	2000-2011	Teacher level	None	Observations with value of "Not Specified" are coded as missing. 2000-2002: W, B, H, A, AI. 2003-2011: W, B, H, A, AI, M.	Teacher-level data from the Ohio Department of Education. School-level data from NCES (2007 FRL data are missing for the entire state of Ohio). Sectorwide student data from NCES.	The data are structured such that teachers are identifiable as employed in a given year if they have nonmissing salary values. There is also a very low match rate on the school-level FRL variable from 2000 to 2003. These estimates are therefore suppressed in the city/sector data tables, as well as in Figure 9 in the Cleveland city profile.
District of Columbia	2003, 2007 and 2011	City level	The city-level estimates are limited to K-12 public school teachers (including charter school teachers).	Separate category for "Pacific Islander" teachers coded as "Asian." All years: W, B, H, A, AI.	City-level estimates from the Schools and Staffing Survey. School-level and sectorwide student data are not applicable, as we only have citywide estimates.	Estimates are presented for illustrative purposes only.

District and sector	Years	Data type	Sample restrictions	Notes on teacher race and ethnicity variable[1]	Data sources	Other notes
Los Angeles District	2002-2011	Teacher level	All observations with salary schedule codes of "T" (teachers with regular credentials) or "L" (teachers with alternative credentials) are retained. The following schedule codes are removed from the dataset: "D" (special services), "G" (certificated administrators) and "X" (unclassified).	Separate categories for "Filipino" and "Pacific Islander" teachers coded as "Asian." Observations with values "Undeclared" and "Unknown" are coded as missing. All years: W, B, H, A, AI.	Teacher-level data from the Los Angeles Unified School District. School-level FRL data from the California Department of Education. School-level race and ethnicity data from NCES. Sectorwide student data from the California Department of Education.	
Los Angeles Charter	2002-2011	Teacher level (not linked across years)	Teachers are identified as observations whose primary duties are 50 percent or more teaching, or who are classified as teachers but not listed as having any administrative or classified personnel duties.	Separate categories for "Filipino" and "Pacific Islander" teachers coded as "Asian." Observations with value of "Not Reported" coded as missing. 2002: W, B, H, A, AI. 2003-2011: W, B, H, A, AI, M.	Teacher-level data from the California Department of Education. School-level data not applicable. Sectorwide student data from the National Alliance of Public Charter Schools (we were not able to obtain sectorwide student race and ethnicity distributions for Los Angeles charter schools from 2002 to 2004)	We identified charter schools in the CADOE dataset as those charters listed as part of the Los Angeles Unified School District, as well as a handful of charters located in Los Angeles but listed under the State Board of Education. There are an unusually high number of observations with missing values on the race and ethnicity question in 2010 and 2011.
New Orleans (Orleans Parish School Board)	2002-2012 (except 2008)	Teacher level	None	Separate category for "Native Hawaiian" and "Other Pacific Islander" (2010-2012) coded as "Asian." 2002-2009: W, B, H, A, AI. 2010-2012: W, B, H, A, AI, M.	Teacher-level data from Orleans Parish School Board. School-level data from NCES. Sectorwide student data from NCES.	In the dataset we were given, there are no observations for 2008. We estimate that it is roughly 200 teachers, which is unlikely to alter our citywide figures even if the missing observations do differ from those that are not missing. See the New Orleans city profile for additional details.
New Orleans (Recovery School District)	2004-2012	Teacher level	Observations with job title code for administrators (111) are removed from the dataset. Original dataset included data for teachers in a handful of schools that are part of the Recovery School District but are not located in New Orleans. These observations are removed from the dataset.	Separate category for "Pacific Islander" (2010-2012) coded as "Asian." 2004-2009: W, B, H, A, AI. 2010-2012: W, B, H, A, AI, M.	Teacher-level data from the Louisiana Department of Education. School-level data from NCES. Sectorwide student data from NCES.	There are an unusually high number of observations with missing values on the race and ethnicity question in 2009, which is due largely to a few schools (run by the Algiers Charter School Association). Teacher identifiers allow linking between RSD and BESE datasets.

District and sector	Years	Data type	Sample restrictions	Notes on teacher race and ethnicity variable[1]	Data sources	Other notes
New Orleans (Louisiana Board of Elementary and Secondary Education)	2002-2012	Teacher level	Observations with job title code for administrators (111) are removed from the dataset. Original dataset included data for teachers in some schools overseen by BESE but not located in New Orleans. These observations are removed from the dataset.	Separate category for "Pacific Islander" (2010-2012) coded as "Asian." 2002-2009: W, B, H, A, AI. 2010-2012: W, B, H, A, AI, M.	Teacher-level data from the Louisiana Department of Education. School-level data from NCES. Sectorwide student data from NCES.	Teacher identifiers allow linking between RSD and BESE datasets.
New York City District	2002-2012	Teacher level	Observations with job code for "teacher trainers" (TRTTQ) are removed from the dataset.	Observations coded as "Other," "Unknown" or "Unspecified" are recoded as missing. All years: W, B, H, A, AI.	Teacher-level data from the New York City Department of Education. School-level data from the New York City Department of Education. Sectorwide student data from the New York City Department of Education.	
New York City Charter	2010-2012	Sector level	Not applicable	Asians appear to be coded as "White" in 2010 and 2011. All years: W, B, H, A, AI, M.	Sector-level teacher data from the New York State Education Department. School-level data are not applicable. Sectorwide student data from the New York State Education Department (2012) and The National Alliance for Pubilc Charter Schools 92010-2011).	
Philadelphia District	2001-2012	Teacher level	The following job titles are removed from the dataset: coach, specialist and department head/chair.	Observations with value of "Other" are coded as missing. All years: W, B, H, A, AI.	Teacher-level data from the School District of Philadelphia. School-level data from NCES. Sectorwide student data from NCES.	

District and sector	Years	Data type	Sample restrictions	Notes on teacher race and ethnicity variable[1]	Data sources	Other notes
Philadelphia Charter	2007-2012	Teacher level	The following job titles are removed from the dataset: administrative/supervisory, coordinate services and others.	Based on frequency distributions, there is an apparent error in the dataset we received. Specifically, the codes for "Asians" and "American Indians" appear to be reversed in 2010 (i.e., "Asians" coded as "American Indians" and vice versa). This error is corrected. Separate categories for "Pacific Islanders" teachers are coded as "Asian." All years: W, B, H, A, AI, M.	Teacher-level data from the Pennsylvania Department of Education. School-level data from NCES. Sectorwide student data from the Pennsylvania Department of Education (2012) and the National Alliance for Public Charter Schools (2010-2011).	There is a very low match rate on the school-level FRL variable in 2007 and 2008. These estimates are therefore suppressed in the city/sector data tables, as well as in Figure 9 in the Philadelphia city profile.
San Francisco District	2003-2012	Teacher level	The following general types of job titles are removed from the dataset: counselors, specialists, analysts, coaches, librarians, nurses, psychologists, social workers, therapists, facilitators, directors and student placement workers.	Separate categories for "Cambodians", "Chinese", "Filipino", "Guamanian", "Japanese", "Korean", "Samoan" and "Vietnamese" teachers coded as "Asian." Observations with values "Decline to State" are coded as missing. All years: W, B, H, A, AI.	Teacher-level data from the San Francisco Unified School District. School-level FRL data from the California Department of Education. School-level student race and ethnicity data from NCES. Sectorwide student data from the California Department of Education.	This dataset has an unusually high proportion of observations missing race/ethnicity values. These observations are distributed across many schools, though they seem particularly high in 5-10 individual schools. In any case, we cannot determine the degree to which this influences our results.
San Francisco Charter	Given the very small number of San Francisco charter schools during the time period of our analysis, as well as the fact that we could not obtain linked teacher-level data for them, we decided to exclude this sector from our study.					

[1] Categories are as follows: W (White), B (Black), H (Hispanic), A (Asian), AI (American Indian) and M (Multiracial).