BEATING THE ODDS

An Analysis of Student Performance and Achievement Gaps on State Assessments

Results from the 2005-2006 School Year

Council of the Great City Schools

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A City-By-City Analysis of Student Performance and Achievement Gaps on State Assessments

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COUNCIL OF THE GREAT CITY SCHOOLS

The Council of the Great City Schools is a coalition of 67 of the nation's largest urban school systems. Its Board of Directors is composed of the Superintendent of Schools and one School Board member from each member city. An Executive Committee of 24 individuals, equally divided in number be-tween Superintendents and School Board members, provides oversight of the 501(c)(3) organization in between Board meetings. The mission of the Council is to advocate for and to assist in the improve-ment of public education in the nation's major cities. To meet that mission, the Council provides ser-vices to its members in the areas of legislation, research, communications, curriculum and instruction, and management. The group convenes two major conferences each year on promising practices in ur-ban education; conducts studies on urban school conditions and trends; and operates ongoing networks of senior personnel, communications, curriculum, research, technology, and others. The Council was founded in 1956 and incorporated in 1961, and has its headquarters in Washington, D.C.

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EXECUTIVE SUMMARY

The Council of the Great City Schools has prepared this seventh edition of *Beating the Odds* to give the nation another look at how inner-city schools are performing on the academic goals and standards set by the states. This analysis examines student achievement in math and reading through spring 2006. It also measures achievement gaps between cities and states, African Americans and whites, Hispanics and whites, and between other groups. Finally, the report looks at progress. It asks two critical questions: "Are urban schools improving academically?" and "Are urban schools closing achievement gaps?"

In general, *Beating the Odds VII* shows that the Great City Schools continue to make important gains in math and reading scores on state assessments. The study also shows evidence that gaps may be narrowing.

The findings in *Beating the Odds VII* are preliminary and leavened with caution, as they were when we first published these data. The nation does not have an assessment system that allows us to measure progress relative to the same standard across all school districts in the country. The Council of the Great City Schools is trying to address this weakness through the Trial Urban District Assessment of the National Assessment of Educational Progress (NAEP) and by advocating for national standards in reading, math, and science.

While NAEP trend lines are coming into view and the nation is debating the wisdom of having a uniform set of academic standards, the data from this report indicate that answers to the questions we have posed are emerging. Urban school districts are making progress. Some outcomes look better than others. Progress in math is better than progress in reading. Trend lines differ from one city to another. Performance at the elementary level grades is generally better than at the middle grades. Nevertheless, the data indicate overall movement and progress.

This report is the nation's seventh look at how its major city school systems are performing on the state assessments devised to boost standards, measure progress, provide opportunity, and ensure accountability for results. Data are presented on 67 city school systems from 37 states and the District of Columbia. The statistics are presented year-by-year and grade-by-grade on each state test in mathematics and reading between 1999-2000 and 2005-2006. City-by-city statistics are available on the Council's website, www.cgcs.org. We also present data by race, language, disability, and income in cases where the states report these publicly.

Every effort was made to report achievement data in a way that was consistent with the *No Child Left Behind Act*—that is, according to the percentages of students above "proficiency." Additionally, this edition of *Beating the Odds* reports the progress of students at the lowest levels of academic attainment so that we can evaluate how urban school districts are serving our most vulnerable students.

The report also shows important demographic data. Included are enrollment data by race, poverty, English-language proficiency, and disability status. Statistics are also presented on student/teacher ratios and average school size. Finally, changes in these variables between 1999-2000 and 2004-2005 (the most recent year on which federally collected data are available) are shown. Data are presented for each city and state.

Where We Are Today: Key Findings

To assess student achievement in the Great City Schools, the Council analyzed state assessment data in a variety of ways.

First, we examined the percentage of students who scored at or above their respective state proficiency bars. These data on fourth and eighth graders are reported on identical districts from 2001-02 through 2005-2006. We also looked at the percentage of students performing at the lowest achievement levels (e.g., "below basic.")

Second, the Council looked at racially identifiable gaps in student scores on state assessments. We wanted to determine the extent to which the Great City Schools have reduced achievement gaps by race and to discern which grades were making the most progress in narrowing the gaps. Rather than defining the achievement gaps as the difference between the various subgroups *within* each district, however, we defined the gap as the difference between the proficiency rates of a given subgroup in the district and the rates among white students in the same grade statewide. This innovation eliminates the artificial "zero-sum" game that pits students in the same district against one another, and takes into account the fact that some cities have very few white students to whom a comparison can be made.

Finally, the Council looked at whether the reading and math performance of each Great City School district was above or below statewide averages. We did not examine school-by-school data or "group performance within school" data because of the sheer volume of such an analysis.

Six major findings about student achievement in urban schools emerged from this study, *Beating the Odds VII*:

Finding 1: Mathematics achievement is improving in urban schools.

The Council's analysis of district and student math scores in the fourth and eighth grades on state assessments shows that—

- 59 percent of fourth-grade students in the Great City Schools scored at or above proficiency levels in math on their respective state exams in 2006, compared with 44 percent in 2002. This gain represents an increase of 15 percentage points or approximately 34 percent.
- 46 percent of eighth-grade students in the Great City Schools scored at or above proficiency levels in math on their respective state exams in 2006, compared with 35 percent in 2002, an increase of 11 percentage points or 31 percent.

Finding 2: Gaps in math achievement in urban schools appear to be narrowing.

The Council's analysis of fourth and eighth-grade math scores shows some progress in reducing racially identifiable achievement gaps over the last six years. The data show that—

- The majority of the Great City School districts[1] – 67 percent – narrowed the gap between their fourth-grade African American students and fourth-grade white students statewide in mathematics proficiency. At the eighth-grade level, 60 percent of the Great City School districts narrowed the achievement gap between their African American students and white students statewide in math.
- 62 percent of the Great City School districts narrowed the gap between their fourth-grade Hispanic students and white fourth graders statewide. 53 percent of Great City School districts narrowed the Hispanic-white gap in math among eighth graders.
- 57 percent of the Great City School districts narrowed the math achievement gap between economically disadvantaged fourth graders and non-economically disadvantaged fourth graders statewide. At the eighth-grade level, 49 percent of districts narrowed this gap.

Finding 3: Urban school achievement is below state averages in math.

Despite significant gains in performance, the majority of urban school districts scored below state averages in fourth and eighth-grade math achievement.

- In 2006, 59 percent of Great City School fourth graders scored at or above proficiency levels in math on their respective state tests, compared with 72 percent of students statewide.[2]
- In 2006, 46 percent of Great City School eighth graders scored at or above proficiency levels in math on their respective state tests, compared with 61 percent of students statewide.
- In 2006, 20 percent of the Great City School districts scored at or above their respective states in fourth-grade math, and 16 percent did so at the eighth-grade level.

The districts with fourth-grade math scores equal to or greater than their respective states included Anchorage, Broward County, FL, Charleston, Christina (DE), Long Beach, Palm Beach (FL), Portland, Sacramento, San Diego, San Francisco, and Seattle. Districts with eighth-grade math scores equal to or greater than their respective states included: Anchorage, Broward County (FL), Hillsborough County (FL), Omaha, Orange County (FL), Palm Beach (FL), Portland, Sacramento, San Diego, and San Francisco.

Finding 4: Reading achievement is improving in urban schools.

The Council's analysis of district and student reading scores in fourth and eighth grades on state assessments[3] shows that—

- 55 percent of fourth-grade students in the Great City Schools scored at or above proficiency levels in reading on their respective state exams in 2006, up from 43 percent in 2002. This gain represents an increase of 12 percentage points or approximately 28 percent.
- 42 percent of eighth-grade students in the Great City Schools scored at or above proficiency levels in reading on their respective state exams in 2006, compared with 34 percent in 2002, an increase of 8 percentage points or 24 percent.

Finding 5: Gaps in reading achievement in urban schools appear to be narrowing.

Evidence from the Council's analysis of fourth and eighth-grade reading scores shows some progress in reducing racially identifiable achievement gaps. The data show that—

[1] Data were not available for every district. The percentages of districts achieving specified outcomes vary from finding to finding. Appendix A shows the number of districts included in each analysis.

[2] This and subsequent calculations include only those states in which the Great City School districts are located.

[3] Language arts scores are used in cases where reading scores are not reported by the state.

- Between 2002 and 2006, the majority of Great City School districts — 77 percent — narrowed the gap between their fourth-grade African American students and fourth-grade white students statewide in reading proficiency. At the eighth-grade level, 67 percent of the Great City School districts narrowed the achievement gap between their African American students and white students statewide in reading.
- 67 percent of Great City School districts narrowed the reading gap between their fourth-grade Hispanic students and white fourth graders statewide between 2002 and 2006. Some 60 percent of Great City School districts narrowed the Hispanic-white gap in reading among eighth graders.
- 75 percent of the Great City School districts narrowed the gap between reading achievement among economically disadvantaged fourth graders and math achievement non-economically disadvantaged fourth graders statewide. At the eighth-grade level, 47 percent of districts narrowed this gap.

Finding 6: Urban school achievement is below state averages in reading.

Despite significant gains in performance, the majority of urban school districts scored below state averages in fourth and eighth-grade reading achievement.

- In 2006, 55 percent of Great City School fourth graders scored at or above proficiency levels in reading on their respective state tests, compared with 67 percent of students statewide.[4]
- In 2006, 42 percent of Great City School eighth graders scored at or above proficiency levels in reading on their respective state tests, compared with 60 percent of students statewide.
- In 2006, 18 percent of Great City School districts scored at or above their respective states in fourth-grade reading, and 20 percent did so at the eighth-grade level.

The districts with fourth-grade reading scores equal to or greater than their respective states included Anchorage, Broward County (FL), Long Beach, Norfolk, Portland, San Diego, San Francisco, Christina (DE), and Seattle. Districts with eighth-grade reading scores equal to or greater than their respective states included Anchorage, Broward County (FL), Charleston, Orange County (FL), Palm Beach (FL), Portland, San Diego, San Francisco, and Tucson.

Who We Are Today: Key Factors That Shape the Urban Context

Big-city school systems are different from districts in other settings. They serve a demographically different student body and they operate in political and financial environments that are more complex, contentious, and competitive than smaller systems.

These contextual differences are significant and should be considered in any study of urban school achievement. The Council's analysis identified two broad factors that warrant attention as the nation strives to meet the goals established by *No Child Left Behind*.

Factor 1: The nation cannot meet the broad goals of *No Child Left Behind* and raise achievement across the board without paying attention to students enrolled in urban schools.

- The Great City Schools enrolled 15 percent of the nation's public school students in school year 2004-2005. (This percentage represents a slight decrease from 16 percent in 1999-2000.)
- The Great City Schools enrolled about one third of the nation's African American, Hispanic, limited English proficient, and poor students.

Factor 2: Students in urban schools are more likely to be African American, Hispanic, or Asian American; to come from low-income families; and to be raised in non-English speaking homes than other students.

The Council's analysis showed that—

- 76 percent of students in the Great City Schools in 2004-2005 were African American, Hispanic, Asian American, or other students of color, compared with about 43 percent nationwide.
- 61 percent of students in the Great City Schools are eligible for a federal free lunch subsidy, compared with about 38 percent nationwide.
- 14 percent of students in the Great City Schools are English language learners, compared with approximately 8 percent nationwide.

[4] That is, compared to the states served by the Council of the Great City Schools districts.

INTRODUCTION

The movement to reform education in the U.S. is founded on improving America's urban public schools. Conversations about standards, testing, vouchers, charter schools, funding, equity, desegregation, governance, privatization, mayors, social promotions, and accountability are discussions—at their core—about public education in the cities.

It is a discussion worth having, for nowhere does the national resolve to strengthen our educational system face a tougher test than in our inner cities. There, every problem is more pronounced, every solution harder to implement.

Several years ago, progress in urban education appeared to be at a standstill. Critics noted that performance was stagnant and urban systems seemed paralyzed by structural problems in governance, labor relations, bureaucracy, resources, management, operations, and politics.

Urban school leadership appeared to have tried everything and come up short: thousands of education programs, hundreds of curricular changes, countless social interventions, numerous parental involvement strategies, all at a cost of millions of dollars. Among many observers, there was the nagging fear that the struggle was lost and the effort wasted.

What changed the outlook, of course, was the standards movement. The public reminded educators—particularly those in cities—why we were in business in the first place and what we were being held responsible for delivering. Not only did the priorities of big city schools change, but the prospects for meeting our challenges brightened as well. And the first fragile signs that a turn-around in urban education began to emerge.

Urban schools know that it is not enough to assure people that we are working harder to meet high standards or to say that the public's money is worth the investment, although both are surely true. We must back up those assurances with results—concrete, verifiable documentation that our efforts to improve education in the cities are paying off and that the public's money is being well spent.

This report provides a seventh look at the performance of the Great City Schools on tests used by the states to measure student achievement and to hold districts and schools accountable under the federal *No Child Left Behind Act*. The report seeks to answer the questions, "Are urban schools improving?" and "Are achievement gaps narrowing?" With this report, the Council intends to provide a straightforward picture of urban school progress to the public, the press, policymakers, educators, and everyone with a stake in education reform.

The report is divided into two sections:

- The first section explains the purpose of the report, the methods used to analyze the data, and the limitations of that data. It lays out the main findings emerging from the Council's analysis of state assessment data and other information. It also presents graphs and bullets showing critical trends in urban student achievement and changes in urban school demographic conditions.
- The second section includes individual district profiles reporting demographics and achievement data for each Council district. Earlier print editions of this report included individual district profiles. This year, the individual profiles are available on our website at http://www.cgcs.org. There, readers have the option of downloading the districts of most interest to them. This change in the print version was done because of the sheer volume of the data now available by city, year, subject, grade level, and subgroup.

The purpose of measuring student performance and reporting it to the public is, of course, to channel help to those students, schools, and communities that need it most—and to honestly confront shortcomings and pursue needed improvements. This report will show the shortcomings. It also lays out the challenges, for *Beating the Odds VII* is not only a report card on urban education—it is also a report card on the nation and its commitment to leave no child behind.

METHODOLOGY

Methods for Collecting and Analyzing Assessment Data

This report presents district-by-district reading and math achievement for 67 of the nation's major city school systems. It updates performance data published in previous editions of *Beating the Odds* through spring 2006. It also presents state-test data by year, grade, race/ethnicity, socio-economic status, and language and disability status.

These state assessment results were collected by Council staff from a number of sources: state websites, reports, and databases. Each state's website was searched for information that described its assessments, the grades and subjects in which the tests were administered, the years in which the tests were given, the format or metric in which results were reported, and changes in test forms, procedures or scales. The decision was ultimately made to include data only on reading (or language arts) and math, because all states reported results in these critical subject areas. Science results will be added in subsequent reports.

Assessment data were then examined to determine the number of years the state had administered the tests to ensure that the report included only results that were comparable from year to year. Data were eliminated if states changed tests or significantly modified their guidelines about which students to test. Texas, for example, changed tests in 2003, so results on the previously used test were eliminated. Every effort was made by Council staff to track changes states made to their previously posted data.

Data were also collected by race where reported by the state. Not all states report their disaggregated data, even if they gather it. Results for African American, Alaskan Native/American Indian, Asian American/Pacific Islander, Hispanic and White students are included in this report.

Data were collected, moreover, on other subgroups when available. Results were included on economically disadvantaged students (usually defined as free & reduced price lunch or Title I eligibility), English language learners (usually defined as limited English proficiency or bilingual), and students with disabilities (usually defined as Special Education or students with Individualized Education Plans).

The reader should note that data are generally presented in the same way that the federal *No Child Left Behind* legislation requires. We have made every effort to report districtwide data in "performance levels" and to show the percentage of students who score at "proficient" or higher levels as specified in the law.

We then calculated the average yearly change for each district and juxtaposed it against the state's progress over the same period so the reader could compare each district's rate of progress with that of its state.

In addition to the data presented for individual districts, aggregate test results are reported for districts and students. Aggregate district results are generated by counting the number of districts that achieved a particular outcome (e.g., the number of districts that increased or decreased since 1999-2000). Student-level aggregate results are generated by calculating enrollment-weighted averages of the outcomes in question (e.g., proficiency rates) for each grade.[5]

Data Limitations

The assessment data presented in *Beating the Odds VII* have a number of important limitations that readers should keep in mind. We have not been able to correct many of these problems since our first report was published, because states have not always changed how they report their results. The reader should be aware of the following limitations in the data—

1. As a result of the nation's 50-state assessment system, it is not possible to compare assessment data across states. Each state has developed its own test, test administration guidelines, timelines, grades tested, and other technical features. It is not technically sound to compare districts across state lines. Therefore, the report does not rank cities on their performance, nor are test results in one state or city directly compared with any other. Comparisons within a given state can be made but should be done with caution.
2. Trend lines vary in duration from state to state. Because of differences in testing patterns, data availability, and changes in tests from state to state, some districts have trend lines spanning more years than other districts do. Some may have data for as many as seven years (from 1999-2000 through 2005-2006), while others may have data for just one year.
3. No tests of statistical significance were conducted on test-score changes, nor are standard errors of measurement included in this report. Most states do not yet publish the statistics necessary to make these calculations possible. As such, the comparisons in this report

[5] In particular, average student level proficiency rates are calculated by weighting the proficiency rate for each state or district by the number of students in that particular state or district, and dividing the sum of these numbers by the total number of students across the districts or states in question.

are made using point estimates, rather than with any confidence intervals.

4. Tests also vary in their degree of difficulty. This report did not attempt to analyze the difficulty or rigor of state assessments. A state with a challenging test may produce lower district scores, while a state with an easy test may have higher district scores. High scores do not necessarily mean an easier test, however.
5. States use similar terminology for the various performance levels (i.e., advanced, proficient, basic, and below basic), but these terms do not mean the same things from state to state. A level of student performance that is considered "proficient" in one state may be "basic" or below in another. In addition, the scale from the highest possible score to the lowest will differ from test to test and will effect how close city averages look compared to their states. Moreover, the distance between any two points on a scale may not be the same.
6. The data in this report are limited by what each state publicly reports. There may be circumstances where the data in this report are incomplete because the state has not posted all of its findings on its website or has not broadly circulated reports containing the findings by our publication date.
7. The analysis compares specific districts to their respective states when data are available for both units and only for the same period of time. For instance, if a district reports five years of data and the state only reports three, then we report trends for only three years. These calculations are represented in the summary statistics regarding district performance relative to their states. The individual profiles show calculations using all available data. The average yearly change numbers, therefore, may not be comparable from one city profile to another.
8. State and aggregate results in the report include data from the respective cities. We have not attempted to remove city data from state or national averages before making comparisons.
9. Some states administer reading tests to their students; other states administer an English language arts test. This report presents both kinds of data under the general "reading" heading. In general, language arts tests include both reading and writing, but states may have such tests with differing mixes of the two areas. In addition, the types of writing included on the state tests may differ from state-to-state and from year-to-year. For instance, one year a state may have a writing component that calls for students to write a narrative, but the next year, the state may have students summarize information or respond to a literature prompt. Scores can fluctuate accordingly. This report relies mainly on reading tests to summarize our findings, but if language arts tests are available instead of reading tests those results are used here.
10. Finally, the reader should recognize that the state data are not the same as data provided on the National Assessment of Educational Progress (NAEP). The state tests may not measure the same things as NAEP; they are given to all children, not just a sample; they use different scale scores, if they use scale scores at all; they use different definitions—in the vast majority of cases—of what proficiency means; they are often much less rigorous; and were designed for different purposes.

Demographic and Staffing Data

To place the academic gains in context, the Council collected additional data on district demographics, staffing, and financing. This information came from various surveys of the National Center for Education Statistics that we collected through the Common Core of Data. Trends for each variable are shown for school years 1999-2000 and 2004-2005 (the most recent year for which federal data were available). Thus, the time period for these contextual data is slightly different from the period for which test scores were reported.[6]

Once the data were collected, the Council prepared preliminary profiles on each member city. Profiles were mailed to the superintendent, school board representative to the organization, and the research director of each member district. Districts were asked to review the data, submit corrections, and add clarifying comments and end notes.

Corrections to the profiles were then made. Few districts adjusted any of the statewide achievement reports, but some provided clarifying information about changes in state testing practices and reporting. Districts were asked to provide documentation in the form of published reports or internet links to support their requested changes. A number of corrections, however, were made to NCES demographic and staffing data. The Council made those corrections but included a note on the profile, so readers would know that data came from NCES but were adjusted by the individual school systems.

[6] Previous editions of *Beating the Odds* have included analyses of financial and staffing data provided by the National Center for Education Statistics. The center recently changed the manner in which these data are analyzed and reported, resulting in changes to previously documented trends and patterns. The Council will publish an analysis of these revised financial data and their implications for urban school districts in a separate report.

MATH ACHIEVEMENT AND GAPS

Improving Math Achievement: A National Priority

Over the past 20 years, the nation has placed a high priority on boosting the performance of U.S. students in mathematics and science. These efforts date to the Sputnik era of the late 1950s, but they intensified in the mid-1980s when America's preeminence was threatened by the thriving economies of Japan and Western Europe. Corporate leaders, governors, and others published a flood of reports at the time citing educational deficiencies as the source of the nation's economic problems and called for Congressional action.

Congress responded by passing the Eisenhower math and science education program in 1984. In 1989, the White House convened a National Education Summit in Charlottesville, Virginia, where President George H.W. Bush and the Governors reached consensus on the need to develop national education goals. One of the goals emerging from this process involved making the United States first in the world in mathematics and science achievement by the year 2000. This goal was not reached, but efforts to attain it paid dividends as math achievement nationwide has increased steadily over the last few years. President George W. Bush proposed a new initiative in 2006 to accelerate those gains and named a National Mathematics Advisory Panel to study the issues. *Beating the Odds VII* examines state assessment results to determine whether urban public school systems are also making progress in mathematics.

Math Achievement in City Schools Compared to the States

First, the Council looked at spring 2006 math scores of the Great City Schools. The math scores from the state tests were analyzed to determine the average proficiency rates of urban fourth and eighth-grade students.[7] We also examined the number of districts with average proficiency rates—overall and by subgroup—that were at or above their respective states. The results, reported in Figures 1 and 2, showed that —

- 59 percent of Great City School fourth-grade *students* scored at a proficient or higher level on their respective state math tests, compared with 72 percent of fourth graders statewide.[8] The gap between the cities and their states in the percentage of fourth graders proficient in math declined by 4 percentage points from 2002 to 2006.
- 46 percent of Great City School eighth-grade *students* scored at a proficient or higher level on their respective state math tests, compared with 61 percent of eighth graders statewide. The gap between the cities and their states in the percentage of eighth graders proficient in math declined by 2 percentage points from 2002 to 2006.
- As shown in Figure 3, 20 percent of Great City School *districts* had fourth-grade math scores that matched or exceeded their respective state averages. Sixteen percent of Great City School districts had eighth-grade math scores that equaled or exceeded their state averages.

Figure 1. Percent of 4th Graders Scoring At or Above Proficiency on State Mathematics Tests, 2002-2006

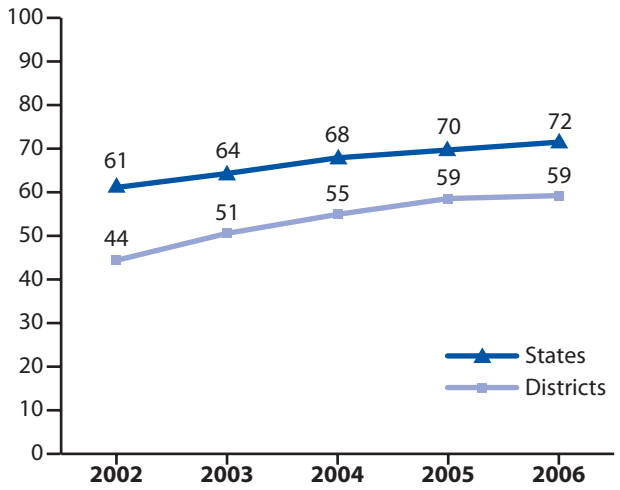
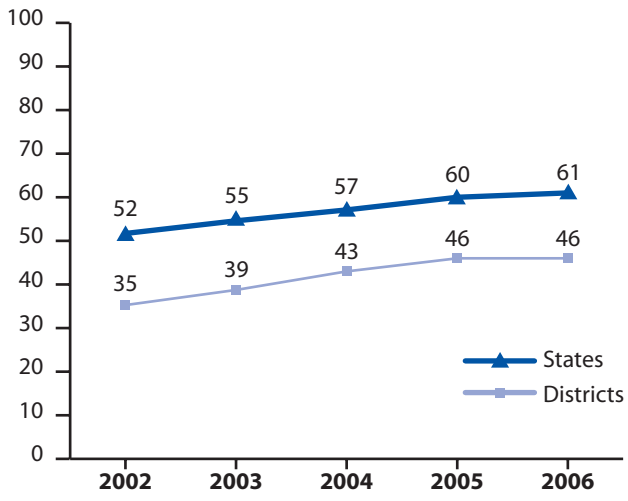


Figure 2. Percent of 8th Graders Scoring At or Above Proficiency on State Mathematics Tests, 2002-2006

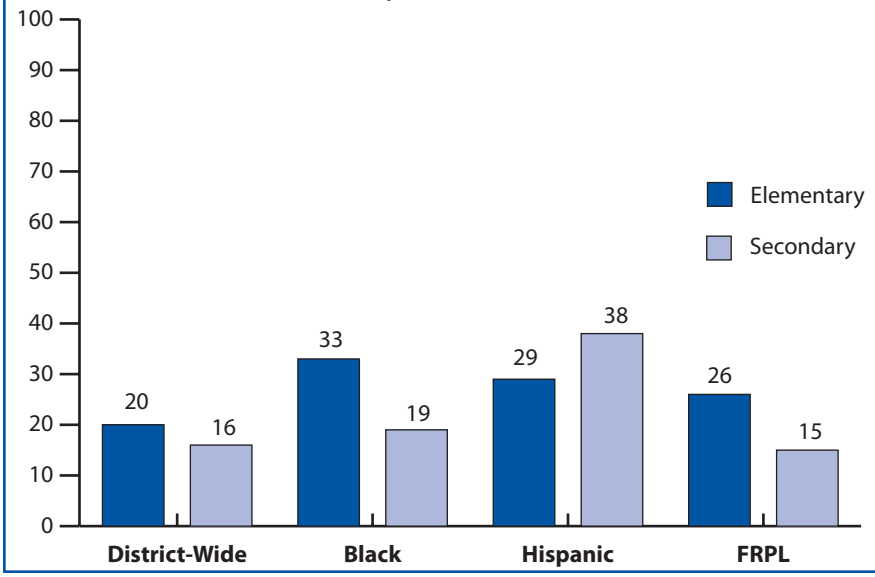


[7] In particular, for each district or state, the fourth and eighth-grade proficiency rates in each district were weighted by the number of students enrolled in these respective grades in that particular district or state.

[8] This and subsequent calculations include only those states in which the Great City School districts are located.

- 33 percent of Great City School *districts* had fourth-grade math scores among their African American students that matched or exceeded their respective state averages for African American students. Twenty-nine percent of Great City School *districts* had fourth-grade math scores among their Hispanic students that matched or exceeded their respective state averages for Hispanic students.
- 19 percent of Great City School *districts* had eighth-grade math scores among their African American students that matched or exceeded their respective state averages for African American students. Thirty-eight percent of Great City School *districts* had eighth-grade math scores among their Hispanic students that equaled or exceeded their respective state averages for Hispanic students.
- 26 percent of Great City School *districts* had fourth-grade math scores among their economically disadvantaged (ED) students that matched or exceeded their state averages for economically disadvantaged students. Fifteen percent of Great City School *districts* had eighth-grade math scores among their economically disadvantaged students that equaled or exceeded their state averages for economically disadvantaged students.

Figure 3. Percent of Districts with Mathematics Proficiency Scores Greater than or Equal to State Scores, 2005-2006



Trends in Math Achievement

Second, the Council examined trends in the percentages of fourth and eighth graders who scored at or above proficiency levels in math on their respective state tests over the last five years.[9] The results, shown in Figures 1 and 2 indicated that—

- The percentage of Great City School fourth-grade students who scored at or above proficiency levels in math increased from 44 percent in 2002 to 59 percent in 2006, an increase of 15 percentage points or 34 percent.
- The percentage of Great City School eighth-grade students who scored at or above proficiency levels in math increased from 35 percent in 2002 to 46 percent in 2006, an improvement of 11 percentage points or 31 percent.
- Increases in the percentage of students who were proficient in math showed some sign of slowing in the last year. Between 2005 and 2006, fourth and eighth-grade math achievement remained the same.

Third, we examined academic trends among the most struggling urban students, i.e., fourth and eighth-grade students who scored "below basic" levels of attainment. This trend encompassed data from 2001-02 through 2005-2006.[10] The analysis showed that –

- The percentage of Great City School fourth graders who scored "below basic" achievement levels in math on their respective state tests decreased from 29 percent in 2002 to 19 percent in 2006, an improvement of 10 percentage points or 34 percent.
- The percentage of Great City School eighth graders who scored "below basic" achievement levels in math on their respective state tests decreased from 30 percent in 2002 to 26 percent in 2006, an improvement of four percentage points or 13 percent.

[9] The analysis included 34 districts for which there were longitudinal math data on fourth graders for each year from 2002 through 2006; and 33 districts for which there was longitudinal data on eighth graders over the same period. Data on third graders or seventh graders were used whenever data on fourth or eighth graders were not available.

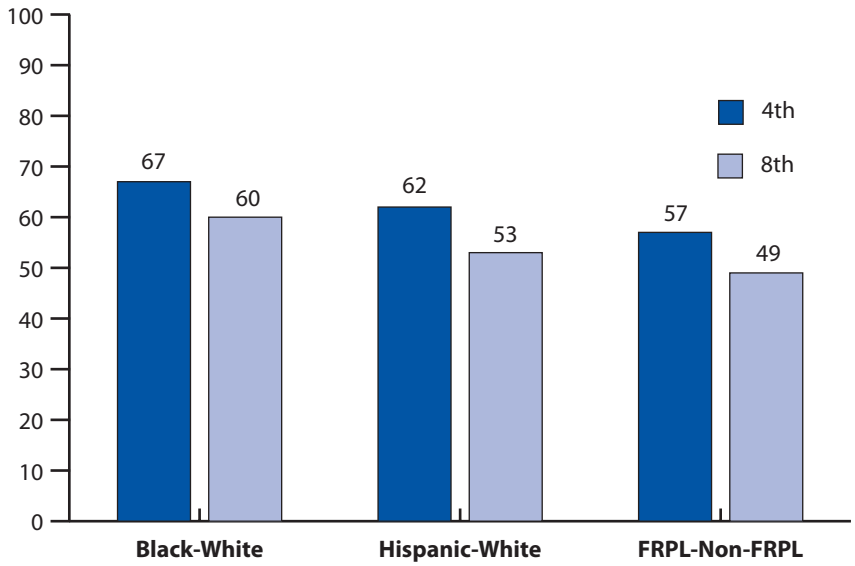
[10] The analysis included 28 districts for which there were longitudinal math data on fourth graders for each year from 2002 through 2006; and 19 districts for which there were longitudinal math data on eighth graders over the same period. The number of districts with applicable data dropped dramatically when including data prior to this period.

Changes in Racial and Income Gaps in Math Achievement

Finally, we examined state assessment data to determine whether racially identifiable gaps in math achievement were narrowing in the Great City Schools. Trends in grades 4 and 8 are presented in Figure 4. The data show that since 2000[11] —

- 67 percent of Great City School *districts* narrowed the achievement gap in math between their African-American fourth graders and white fourth graders statewide.
- 60 percent of Great City School *districts* narrowed the achievement gap in math between their African-American eighth graders and white eighth graders statewide.
- 62 percent of Great City School *districts* narrowed the achievement gap in math between their Hispanic fourth graders and white fourth graders statewide.
- 53 percent of Great City School *districts* narrowed the achievement gap in math between their Hispanic eighth graders and white eighth graders statewide.
- 57 percent of Great City School *districts* narrowed the achievement gap in math between their economically disadvantaged fourth graders and non-economically disadvantaged fourth graders statewide.
- 49 percent of Great City School *districts* narrowed the achievement gap in math between their economically disadvantaged eighth graders and non-economically disadvantaged eighth graders statewide.

Figure 4. Percent of Districts with Narrowing Racial and Income Achievement Gaps in Mathematics, 2000-2006



[11] All available data for a given subgroup were used in this analysis. The trend lines vary from two to six years, depending on the state.

READING ACHIEVEMENT AND GAPS

Improving Reading Achievement: A New Priority

Until recently, the reading skills of the nation's students had not received as much attention as their math skills. The Sputnik-era did not trigger a national debate about reading performance like it did about math and science. And the Charlottesville Summit did not focus on reading in the same way as it did on other goals. A national priority on adult literacy was set following the Charlottesville event, but there was no priority given to making the United States first in the world in reading achievement. The result, in part, has been sluggish reading gains for many years.

Still, a considerable amount of research has been conducted over the last ten years that has important implications for schools. New studies on childhood brain development enhanced our understanding of how youngsters learn and which teaching strategies were most promising. And the research from the National Institute for Child Development, the National Reading Panel, and others clarified the necessary steps in the reading process. Out of this work came President George W. Bush's "Reading First" initiative and a new national priority to raise reading performance for all children. *Beating the Odds VII* looked at state test data to determine whether reading progress was evident in city schools.

Reading Achievement in City Schools Compared to the States

First, the Council looked at spring 2006 reading scores of the Great City Schools. The reading scores from the state tests were analyzed to determine the average proficiency urban fourth and eighth-grade students.[12] We also examined the number of districts with average proficiency rates—overall and by subgroup—that were at or above their respective states. The results, reported in Figures 5 and 6, showed that—

- 55 percent of Great City School fourth-grade *students* scored at a proficient or higher level on their respective state reading tests, compared with 67 percent of fourth graders statewide.[13] The gap between the cities and their states in the percentage of fourth graders proficient in reading declined by 3 percentage points from 2002 to 2006.

Figure 5. Percent of 4th Graders Scoring At or Above Proficiency on State Reading Tests, 2002-2006

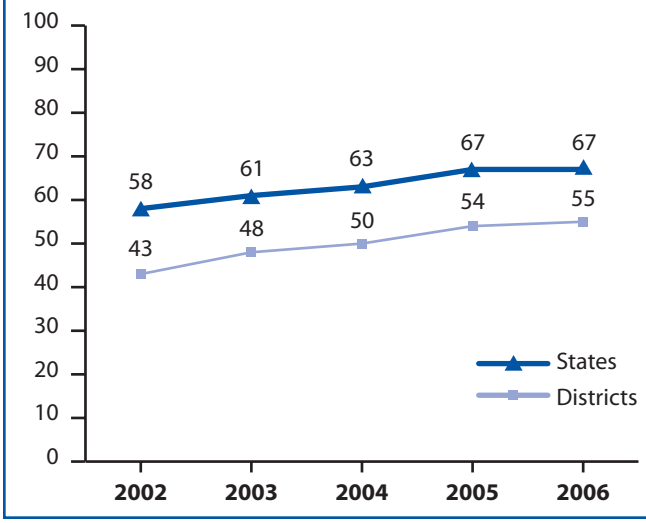
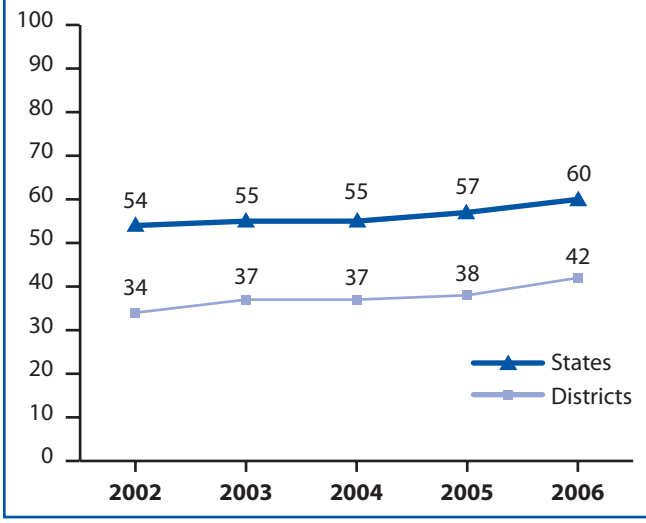


Figure 6. Percent of 8th Graders At or Above Proficiency on State Reading Tests, 2002-2006



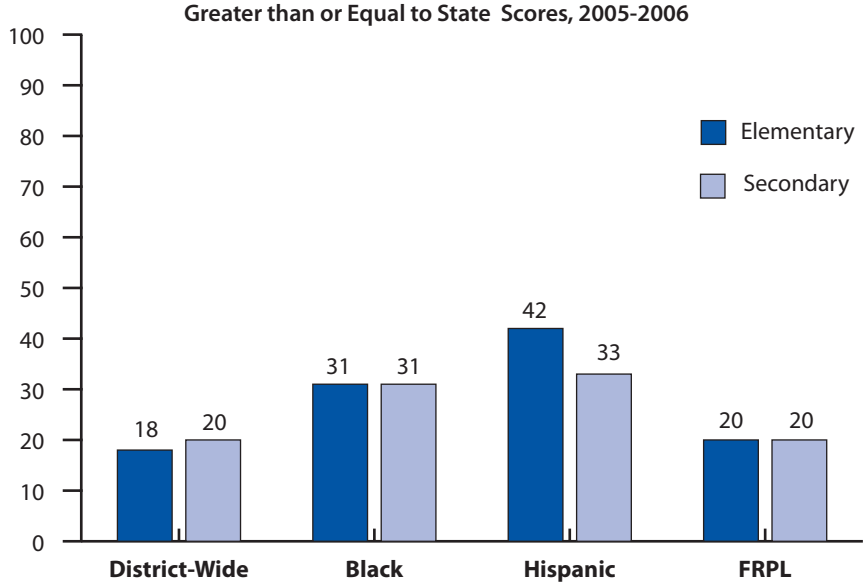
- 42 percent of Great City School eighth-grade *students* scored at a proficient or higher level on their respective state reading tests, compared with 60 percent of eighth graders statewide. The gap between the cities and their states in the percentage of eighth graders proficient in reading declined by 2 percentage points from 2002 to 2006.

[12] In particular, for each district or state, the fourth and eighth-grade proficiency rates in each district were weighted by the number of students enrolled in these respective grades in that particular district or state. English language arts scores were used in cases where reading data were not available. The data indicate somewhat higher reading scores than English language arts scores, but slightly greater gains in English language arts than in reading from 2002 to 2006.

[13] This and subsequent calculations include only those states in which the Great City School districts are located.

- As shown in Figure 7, 18 percent of Great City School *districts* had fourth-grade reading scores that matched or exceeded their respective state averages. Twenty percent of Great City School *districts* had eighth-grade reading scores that equaled or exceeded their state averages.
- 31 percent of Great City School *districts* had fourth-grade reading scores among their African American students that matched or exceeded their state averages for African American students. The same percentage of districts had eighth grade reading scores that exceeded the state average for eighth grade students.
- 42 percent of Great City School *districts* had fourth-grade reading scores among their Hispanic students that matched or exceeded their state averages for Hispanic students. 33 percent of Great City School districts had eighth-grade reading scores among their Hispanic students that equaled or exceeded statewide scores among Hispanic eighth graders.
- 20 percent of Great City School *districts* had fourth-grade *and* eighth-grade reading scores among their economically disadvantaged (ED) students that matched or exceeded their state averages for economically disadvantaged students.

Figure 7. Percent of Districts with Reading Proficiency Scores Greater than or Equal to State Scores, 2005-2006



Trends in Reading Achievement

Second, the Council examined trends in the percentages of fourth and eighth graders who scored at or above proficiency levels in reading on their respective state tests over the last five years. [14] The results, shown in Figures 5 and 6, indicated that—

- The percentage of Great City School fourth-grade students who scored at or above proficiency levels in reading on their respective state tests increased from 43 percent in 2002 to 55 percent in 2006, an improvement of 12 percentage points or 28 percent.
- The percentage of Great City School eighth-grade students who scored at or above proficiency levels in reading on their respective state tests increased from 34 percent in 2002 to 42 percent in 2006, an improvement of 8 percentage points or just under 24 percent.
- Increases in the percentage of students who were proficient in reading showed some signs of slowing last year at the fourth-grade level but accelerating in the eighth grade. Between 2005 and 2006, fourth-grade reading improved by one percentage point, while eighth-grade reading achievement improved by four percentage points—the steepest one-year gain since 2002.

Third, we examined academic trends among the most struggling urban students, i.e., fourth and eighth-grade students who scored "below basic" levels of achievement.[15] The analysis showed that –

- The percentage of Great City School fourth graders who scored "below basic" achievement levels in reading on their respective state tests decreased from 27 percent in 2002 to 21 percent in 2006, an improvement of 6 percentage points or 22 percent.

[14] The analysis included 31 districts for which there were longitudinal reading data on fourth graders for each year from 2002 though 2006; and 31 districts for which there were longitudinal data on eighth graders for each year from 2002 through 2006.

[15] The analysis included 30 districts for which there were longitudinal reading data on fourth graders for each year from 2002 through 2006; and 26 districts for which there were longitudinal reading data on eighth graders over the same period. (The number of districts with applicable data dropped dramatically when including data prior to this period.)

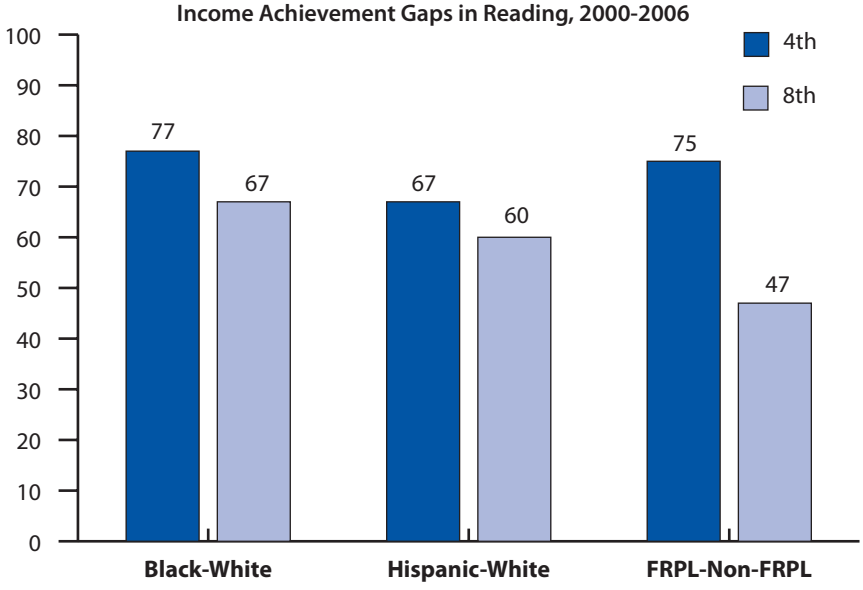
- The percentage of Great City School eighth graders who scored "below basic" achievement levels in reading on their respective state tests decreased from 29 percent in 2002 to 25 percent in 2006, an improvement of 4 percentage points or 14 percent.

Changes in Racial and Income Gaps in Reading Achievement

Finally, we examined state assessment data to determine whether racially identifiable gaps in reading achievement were narrowing in the Great City Schools. Trends in grades 4 and 8 are presented in Figure 8. The data show that since 2000[16] —

- 77 percent of Great City School *districts* narrowed the achievement gap in reading between their African American fourth graders and white fourth graders statewide.
- 67 percent of Great City School *districts* narrowed the achievement gaps in reading between their African American eighth graders and white eighth graders statewide.
- 67 percent of Great City School *districts* narrowed the achievement gap in reading between their Hispanic fourth graders and white fourth graders statewide.
- 60 percent of Great City School *districts* narrowed the achievement gap in reading between their Hispanic eighth graders and white eighth graders statewide.
- 75 percent of Great City School *districts* narrowed the achievement gap in reading between their economically disadvantaged fourth graders and non-economically disadvantaged fourth graders statewide.
- 47 percent of Great City School *districts* narrowed the achievement gap in reading between their economically disadvantaged eighth graders and non-economically disadvantaged eighth graders statewide.

Figure 8. Percent of Districts Narrowing Racial and Income Achievement Gaps in Reading, 2000-2006



[16] All available data for a given subgroup were used in this analysis. The trend lines vary from two to six years, depending on the state.

Student Demographics and Staffing

The challenge of the Great City Schools is to increase student achievement in a context far different from that of the average public school system. Urban education is unique, in part, because it serves students who are typically from lower income families, who are learning English as a second language, and who often face discrimination. The role of urban schools is to overcome these barriers and teach all children to the same high standards.

This chapter examines the context of urban education—a context that should be considered in discussing the achievement data presented in previous chapters. The chapter reviews basic demographic characteristics of the Great City Schools, including student poverty and limited English proficiency, and how they have changed during the period in which state assessments were being implemented.

The reader can find individual city data online. The demographic and staffing data for this portion of the study were gathered from the Common Core of Data at the National Center for Education Statistics. Due to the preliminary and sometimes erroneous nature of some of these 2004-2005 data, the information was supplemented with data from district or state websites and district research staff.

Student Demographics

The demography of urban education continues to be a subject of enormous public interest. Our student composition is important because research shows that income, disability, and English-language proficiency are strongly correlated with academic achievement.

Student Enrollment in the Great City Schools

The Great City Schools enroll a significant share of the nation's students. Preliminary data from the NCES Common Core of Data show that—

- The Great City Schools enrolled 7,384,270 students in 2004-2005 (the most recent year on which federal data are available), an increase of less than one percent over the 7,364,557 students enrolled in 1999-00.
- During the same period, total public school enrollment nationally grew by about 5 percent. Enrollments increased from 45,975,758 students in 1999-00 to 48,374,002 students in 2004-2005.
- The share of the nation's public school students enrolled in the Great City Schools decreased slightly from 16 percent in 1999-00 to 15 percent in 2004-2005.

Income and Poverty in the Great City Schools

Students in the Great City Schools are far more likely to come from low-income homes than the average student nationally. A summary of key indicators for the 2004-05 school year include the following—

- About 61 percent of students in the Great City Schools were eligible for a free lunch subsidy, compared with 38 percent nationally.
- About 25 percent of the nation's free-lunch eligible students are enrolled in the Great City Schools.

English Language Learners and Students with Disabilities

The Great City Schools also serve a higher proportion of English language learners than the average school system. However, these urban school systems enroll about the same percentage of students with disabilities as the average school district nationally, although the Great City Schools often enroll a greater share of students with high-cost disabilities. Key indicators in the 2004-05 school year include the following—

- About 14 percent of students enrolled in the Great City Schools are English language learners, compared with 8 percent of students nationally.
- About 11 percent of the students in the Great City Schools are classified as students with disabilities, compared with 12 percent nationally.
- Urban schools tend to enroll more students with low-incidence, high-cost disabilities than the average district. This is probably due to deficiencies in the quality and availability of health, child, and prenatal care in many inner cities.

Enrollments by Race and Ethnicity in the Great City Schools

The racial characteristics of urban schools are also significantly different from the average school system nationwide. Approximately 76 percent of Great City School students are of color—primarily African American, Hispanic, or Asian American—compared with 43 percent nationally.

Key statistics include the following—

- About 35 percent of Great City School students were African American in 2004-2005, compared with 17 percent nationally.

COUNCIL OF THE GREAT CITY SCHOOLS

Demographics	Great City Schools		Nation	
	1999-2000	2004-2005	1999-2000	2004-2005
Number of Students	7,364,557	7,384,270	45,975,758	48,374,002
Percent Free & Reduced Price Lunch Eligible	61	61	34	38
Percent of Students with Individual Educational Plans	13	11	13	12
Percent of English Language Learners	17	14	7	8
Percent American Indian/Alaskan Native	1	1	1	1
Percent Asian/Pacific Islander	7	6	7	4
Percent African American	39	35	17	17
Percent Hispanic	30	32	16	19
Percent White	24	24	63	57
Number of FTE Teachers	402,923	374,109	2,887,218	2,862,014
Student-Teacher Ratio	18	20	16	17
Number of Schools	10,019	11,419	91,985	97,935

District as a Percentage of the State's Public Schools			1999-2000	2004-2005
Percent of Students			16	15
Percent of Minority Students			31	27
Percent of African American Students			35	31
Percent of Hispanic Students			30	26
Percent of FRPL			26	25
Percent of IEPs			16	13
Percent of ELLs			35	26
Percent of Schools			11	12
Percent of Teachers			14	13

DEMOGRAPHICS NOTES:

Primary Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, "Public Elementary/Secondary School Universe Survey", "Local Education Agency Universe Survey". (All data are labeled preliminary by NCES.)

Some data were also corrected and updated on the basis of information provided by the districts and/or by state and district websites.

- About 32 percent of Great City School students were Hispanic in 2004-2005, compared with 19 percent nationally.
- About 24 percent of Great City School students were white in 2004-2005, compared with 57 percent nationally.
- About 6 percent of Great City School students were Asian American and members of other groups in 2004-2005, compared with 4 percent nationally.
- The percentage of students in the Great City Schools who were African American declined from 39 percent in 1999-2000 to 35 percent in 2004-05. (The percentage of students nationally who were African American remained at 17 percent over the same period.)
- The percentage of students in the Great City Schools who were Hispanic increased from 30 percent in 1999-2000 to 32 percent in 2004-05. (The percentage of students nationally who were Hispanic rose from 16 percent to 19 percent over the same period.)
- Approximately 27 percent of all students of color in the nation were enrolled in the Great City Schools in 2004-2005.

Student-Teacher Ratios and Average Enrollments per School

Research suggests that the number of students in a class affects student achievement. In particular, access to smaller classes has been shown to improve student achievement. Put another way, larger classes have a negative effect on student performance. Moreover, the benefits of smaller classes appear to be greater for disadvantaged and minority students. In order to explore this issue, the Council analyzed two contextual variables: student-teacher ratios and average enrollments per school. Student-teacher ratios are not synonymous with class size, because they include special education teachers and other instructional staff that are often assigned to small and dedicated classes, but the ratios might serve as a convenient proxy.

- Student-teacher ratios in the Great City Schools were somewhat higher than the national average in 2004-2005: 20 students per teacher in the major city schools, compared with 17 nationally.
- Student-teacher ratios in the Great City schools and the nation have increased somewhat since 1999-2000, when they averaged 18 and 16 pupils per teacher, respectively.

Some research suggests that smaller schools may be more effective interpersonally, but the data on the effects of smaller schools on student achievement is mixed at best.

The Council's analysis showed the following trends in school size in urban districts—

- The average number of students per school in the Great City Schools declined from 735 students in 1999-00 to 647 in 2004-2005 —a drop of about 12 percent.
- The average number of students per school nationally decreased from 500 in 1999-00 to 494 in 2004-2005—a decline of about 1 percent.
- The average school in the Great Cities enrolled about 31 percent more children (647 students) than the average school nationally (494 students) in 2004-2005.

Discussion

The Data Show Encouraging Trends

This report represents the seventh time that the Council of the Great City Schools has examined the status and progress of America's urban schools on state reading and math tests. The report is imperfect for all the reasons indicated in the methodology section. Data are not comparable from one state to another. Test results are reported in different metrics. Not all states publish their disaggregated results. Test participation rates are not always available. Testing procedures are sometimes not the same from year to year. All of these limitations underscore the need for a national set of achievement standards as well as a national system for organizing, aggregating, and disseminating data regarding how the nation's school districts are performing on the goal of improving achievement and reducing racially and economically identifiable achievement gaps.

Nevertheless, the data in *Beating the Odds VII* present the best available picture of how America's Great City Schools are performing on state tests and strongly suggest that they are making substantial progress in both reading and math.

These results continue to be preliminary but encouraging. We did not perform elegant mathematical analyses on the data or conduct tests of statistical significance. The Council of the Great City Schools wanted to present raw data wherever possible so no one would wonder if the real results were obscured by complicated statistical analyses.

The Council is committed to improving its annual reporting of city results on state tests. And the Council will make every effort to continue reporting data in a way that is consistent with *No Child Left Behind* (NCLB). We want to encourage the public to expect more transparency in urban school data.

City schools, moreover, want to improve their reporting to the nation on other indicators, including course-taking patterns and graduation rates. No single indicator gives the public the entire picture of urban education, any more than one Stock Market index adequately describes the economy.

However limited and flawed the state data continue to be, the overall direction of the state numbers is corroborated by the most recent estimates from the National Assessment of Education Progress (NAEP). The state and the NAEP assessments are entirely different tests, designed with different purposes, and using entirely different metrics. Both the 2006 state assessment data and the 2005 data from the NAEP (the most recent year for which data are available), however, indicate that math achievement in the cities has improved by significant margins at both the fourth and eighth grades, and that reading is improving in the cities at the fourth-grade level. NAEP data do not yet indicate the presence of significant progress in eighth-grade reading as the state data in this report do.

Math Results

The trends in math performance are unambiguous for the nation and the Great City Schools. Achievement is improving. The only debate at this point is over whether the gains should be faster. *Beating the Odds VII* indicates that the percentage of urban fourth graders scoring at or above proficiency in math has increased from 44 percent in 2001-02 to 59 percent in 2005-2006, a difference of 34 percent. At the same time, the percentage of urban eighth graders proficient in math has increased from 35 percent to 46 percent, an increase of 31 percent. The Great City Schools are also making progress in reducing the percentage of students scoring below "basic" achievement levels on state tests. Nonetheless, progress appears to have slowed at both the city and state levels between 2004-2005 and 2005-2006—but the longer term trend indicates that the cities are narrowing the performance gap with the states.

Reducing racial disparities in academic achievement is also a fundamental goal of NCLB. This report, *Beating the Odds VII*, indicates that the Great City Schools are reducing racial and ethnic gaps in student performance. Approximately two thirds of Council districts are narrowing racial and ethnic gaps in math achievement among fourth graders. Though the numbers are slightly lower, the majority of districts are also showing progress on this goal among eighth graders. The majority of districts, 57 percent, are also reducing economic differences in achievement among elementary level students. Somewhat fewer districts, 49 percent, are succeeding in this regard among eighth graders.

Reading Results

The data in this report also suggest that reading achievement in the Great City Schools is improving. *Beating the Odds VII* found gains in the percentage of students who were scoring at or above proficiency levels on their respective state tests. The percentage of urban fourth graders scoring at the proficient level or above in reading or language arts increased from 43 percent in 2001-02 to 55 percent in 2006, a 28 percent increase. The percentage of urban eighth graders who were proficient in reading or language arts increased from 34 percent to 42 percent over the same period, an improvement of 24 percent. As in math, the urban districts also showed progress in reducing the numbers of students reading below "basic" levels of attainment.

The result is that the cities are reducing the performance gap with the states at both fourth and eighth-grade levels.

Even more so than in math, racial achievement gaps in elementary reading achievement showed signs of narrowing. Some three out of every four urban school districts narrowed the gaps between African-American and White fourth graders and between economically disadvantaged fourth graders and their more well off counterparts. Similarly, two thirds of districts narrowed the fourth grade Hispanic-white achievement gap. While only 47 percent of Great City School districts narrowed economic gaps in reading achievement among eighth graders, the vast majority of big city districts, 75 percent, did in fact reduce economic differences in reading achievement among fourth-grade students.

The Urban Context

Progress in math and reading achievement is occurring in an urban context that is significantly different from other schools. *Beating the Odds VII* looked at those differences and how they have changed over the last several years. Urban schools enroll students who are about twice as likely to be poor or to be English language learners as those in the average school system nationwide. In addition, the Great City Schools enroll about one-third (27 percent) of all students of color in the country and disproportionately large numbers of English language learners and poor students. These percentages have remained relatively unchanged in recent years.

It is clear, nonetheless, that student achievement in the Great City Schools is improving. Some of these gains are coming from working harder and smarter and squeezing inefficiencies out of every scarce dollar. Some of the gains, however, come from cities doing what the nation has agreed is likely to work—high standards, strong and stable leadership, better teaching, more instructional time, regular assessments, stronger accountability, and efficient management.

The data suggest that gains are possible on a large scale—not just school-by-school. It is now time to determine how the pace of improvement can be accelerated. The Council of the Great City Schools and its member districts are asking these questions and pursuing the answers aggressively.

The nation, for its part, needs to think long and hard about why urban schools have to beat any odds.

Sources

Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005 Mathematics Assessment.

Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005 Reading Assessment.

Department of Education, National Center for Education Statistics, Common Core of Data, "Public Elementary/Secondary School Universe Survey," "Local Education Agency Universe Survey," "National Public Education Financial Survey," and "Revenues and Expenditures for Public Elementary and Secondary Education." (All data are labeled preliminary by NCES.)

Assessment data were gathered primarily from state and district websites and reports. State and district assessment and/or research officers provided some data.

Appendix A

Figure 1: 4th Grade Math Proficiency 2002-2006	Districts	States
	34	14
Figure 2: 8th Grade Math Proficiency 2002-2006	**Districts**	**States**
	33	21
Figure 3: Math Proficiency 2005-2006	**Greater than or Equal to State Scores**	**Districts Reporting**
Elementary	11	56
Secondary	9	57
Black		
Elementary	17	51
Secondary	9	48
Hispanic		
Elementary	12	42
Secondary	13	34
FRPL-Non-FRPL		
Elementary	14	53
Secondary	7	48
Figure 4: Achievement Gaps in Math 2000-2006	**Narrowing Achievment Gaps**	**Districts Reporting**
Black-White 4th Grade	30	45
Black-White 8th Grade	25	42
Hispanic-White 4th Grade	28	45
Hispanic-White 8th Grade	21	40
FRPL-Non-FRPL 4th Grade	21	37
FRPL-Non-FRPL 8th Grade	17	35
Figure 5: 4th Grade Reading Proficiency 2002-2006	**Districts**	**States**
	31	16
Figure 6: 8th Grade Reading Proficiency 2002-2006	**Districts**	**States**
	31	18
Figure 7: Reading Proficiency 2005-2006"	**Greater than or Equal to State Scores**	**Districts Reporting**
Elementary	10	57
Secondary	9	45
Black		
Elementary	17	54
Secondary	17	54
Hispanic		
Elementary	18	43
Secondary	14	42
FRPL-Non-FRPL		
Elementary	11	54
Secondary	11	54
Figure 8: Achievement Gaps in Reading 2000-2006	**Narrowing Achievment Gaps**	**Districts Reporting**
Black-White 4th Grade	33	43
Black-White 8th Grade	30	45
Hispanic-White 4th Grade	29	43
Hispanic-White 8th Grade	26	43
FRPL-Non-FRPL 4th Grade	27	36
FRPL-Non-FRPL 8th Grade	16	34

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