Research Summary

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Trends in Chicago's Schools across Three Eras of Reform: Summary of Key Findings

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This is a summary of key findings from a more comprehensive study. The full report is available at ccsr.uchicago.edu.

Executive Summary

In 1988, U.S. Secretary of Education William Bennett proclaimed Chicago's public schools to be the worst in the nation. Since that time, Chicago has been at the forefront of urban school reform. Beginning with a dramatic move in 1990 to shift power away from the central office, through CEO Paul Vallas's use of standardized testing to hold schools and students accountable for teaching and learning, and into CEO Arne Duncan's bold plan to create 100 new schools in 10 years, Chicago has attempted to boost academic achievement through a succession of innovative policies. Each wave of reform has brought new practices, programs, and policies that have interacted with the initiatives of the preceding wave. And with each successive wave of reform this fundamental question has been raised: Has progress been made at Chicago Public Schools (CPS)?

This study addresses the question by analyzing trends in elementary and high school test scores and graduation rates over the past 20 years. Key findings described briefly in this summary report include:

- Graduation rates have improved dramatically, and high school test scores have risen; more students are graduating without a decline in average academic performance.
- Math scores have improved incrementally in the elementary/middle grades, while elementary/middle grade reading scores have remained fairly flat for two decades.
- Racial gaps in achievement have steadily increased, with White students making more progress than Latino students, and African American students falling behind all other groups.
- Despite progress, the vast majority of CPS students are at academic achievement levels that are far below what they need to graduate ready for college.

Many of the findings in this report contradict trends that appear in publicly reported data. For instance, publicly reported statistics indicate that CPS has made tremendous progress in elementary math and reading tests, while this analysis demonstrates only incremental gains in math and almost no growth in reading. The discrepancies are due to myriad issues with publicly reported data—including changes in test content and scoring—that make year-over-year comparisons nearly impossible without complex statistical analyses, such as those undertaken for this report. This leads to another key message in this report:

- The publicly reported statistics used to hold schools and districts accountable for making academic progress are not accurate measures of progress.

For this study, we addressed the problems in the public statistics by carefully constructing measures and methods to make valid year-over-year comparisons. This allowed us to create an accurate account of the progress made by CPS since the early 1990s. The Consortium on Chicago School Research (CCSR) at the University of Chicago has a long history of tracking trends in Chicago's schools. Through 20 years of studying the district, we have developed methods for using student data to create indicators that are comparable over time, adjusting for changes in tests, policies, and conditions that make the publicly reported statistics unsuitable for gauging trends in student performance.

We divide the last 20 years into three eras of reform, defined by district leadership and the central reform policies that those leaders pursued. Era 1 is the time of decentralized control of schools, when decisions over budget and staffing were transferred from the central office to locally elected school boards. Era 2 is defined by the beginning of mayoral control over the schools, the tenure of Paul Vallas as CEO, and the beginning of strong accountability measures for students and schools. Era 3 is defined by Arne Duncan's tenure as CEO, the emphasis on diversification through the creation of new schools, and a greater use of data in practice. While these three eras are defined by very different key policies, each era of reform builds on the reforms of the previous era.

This report shows areas of substantial progress, as well as areas of concern, and counters a number of misconceptions that exist about the state of the schools. What it does not do is draw conclusions about the effects of particular school policies on the progress of students. Changes in student achievement over the last 20 years are a result of the totality of policies, programs, and demographic changes that have occurred in and around the schools. The policies of each new school administration have interacted with the policies of the preceding administration. In some cases over the past 20 years, individual policies have been studied; where evidence exists that a policy had a specific effect on student outcomes, we report it. However, it is beyond the scope of this study to definitively analyze the combined effects of myriad policies.

Graduation Rates Have Improved Dramatically, Without a Decline in High School Performance

Chicago schools have shown remarkable progress over the last 20 years in high school graduation rates. In the early 1990s, students who entered Chicago high schools were equally likely to drop out as to graduate. Now they are more than twice as likely to graduate as to drop out. Graduation rates have improved among students of all racial/ethnic groups and among both boys and girls. Improvements in graduation rates began to occur in Era 1, slowed down in Era 2, and then accelerated considerably in Era 3.

At the same time, high school students have improved their performance on the tests administered to all high school juniors in Illinois, with ACT scores rising by about a point over the last decade. All students who graduate now do so with courses required for admission to college, while many students used to take just one science credit and remedial math and English courses.

Math Scores Have Improved Incrementally in the Elementary/Middle Grades, but Reading Scores Have Remained Fairly Flat

Math scores have risen in the elementary/middle grades; students are now scoring at a level similar to students who were one year older in the early 1990s, at least in some grade levels. This could be viewed as a remarkable improvement; at the same time, the typical student has moved from just meeting state standards

to a level that is still at the low end of the range of scores that meet state standards. Students at this level are extremely unlikely to reach ACT college-readiness benchmarks by the time they are juniors in high school. Due to a disconnect between the elementary school ISAT standards and the high school college-readiness standards as defined by ACT, elementary students must actually exceed standards—rather than simply meet standards—on the Illinois test in order to have a reasonable chance of meeting ACT college benchmarks in high school.

Reading scores in the elementary/middle grades have not shown much improvement over the three eras of school reform. There were some improvements in the lower grades during Era 2, and scores improved modestly among White and Asian students across all three eras. However, scores have not improved at all among African American students, which is the largest racial group in CPS. Reading skills in general remain at a low level.

While students' test performance is low in Chicago, it is not lower than the test performance at other schools in Illinois that serve similar populations of students. In fact, Chicago students score better than residents of other parts of Illinois who attend schools that serve students with similar backgrounds. However, because Chicago schools serve a very economically disadvantaged student population compared to most of the rest of Illinois, their performance is much lower than the average school in Illinois.

The Average Student Is Far Below College-Ready Standards

Most CPS students meet state learning standards on the state tests in the elementary/middle grades. However, the eighth grade state standards are well below the ninth grade benchmarks for college readiness. Few CPS students meet these benchmarks when they enter high school, which means they have little chance of making enough progress to attain ACT scores that are expected for admission to four-year colleges. Previous CCSR research has shown that the elementary state standards are far easier to meet than the high school standards, making it appear that students are better prepared for high school than they actually are.

Racial Gaps Increased in All Eras, Especially the Gap Between African American Students and Students of Other Races/Ethnicities

College readiness among African American and Latino students is an area of particular concern. By 2009, White and Asian CPS students had average ACT scores that were close to ACT college-readiness benchmarks. They were also likely to have taken the high school courses that would be expected of applicants to selective four-year colleges. However, the elementary and high school test scores of African American and Latino students were much further behind. Furthermore, African American students' scores improved the least over the three eras. Especially in the elementary/middle schools, test scores for African American students improved at a much slower rate than those of other students. Average scores for African American students improved slightly in math, while improving moderately among other students. There were virtually no improvements in reading scores among African American students, while White and Asian students showed some modest improvements and Latino students showed some slight improvements. Thus, African American students increasingly fell behind other students over the last 20 years, especially in Era 3.

Even in an Age of Accountability, Publicly Reported Statistics Are Not Useful for Gauging District Progress

Chicago not only has been at the forefront of school reform policies but has also been ahead of most of the rest of the country in collecting data and tracking student and school performance. Yet, even with a heavy emphasis on data use and accountability indicators, the publicly reported statistics that are used by CPS and other school districts to gauge progress are simply not useful for measuring trends over time. The indicators have changed frequently—due to policies at the local, state, and federal levels; changes made by test makers; and changes in the types and numbers of students included in the statistics. As there is a greater push at both the state and federal levels to use data to judge student and school progress, we must ensure that the statistics that are used are comparable over time. Otherwise, future decisions about school reform will be based on flawed statistics and a poor understanding of where progress has been made.


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Summary of Key Findings

Chicago school reform from 1990 to 2009 can be divided into three eras, based on district leadership and key policies. Most of the reforms from one era continued into subsequent eras, making it difficult to attribute the effects of any policy to a particular CPS administration. Era 1 begins with the passage of the Chicago School Reform Act of 1988. This act established Local School Councils, which were composed of the school principal, representatives of the faculty, parents, and community members. This act devolved authority to the local schools that had previously been held by the central office. The Local School Councils had the power to hire the principal, as well as to allocate financial resources and to make decisions about curriculum and other academic matters. We refer to this era as "Decentralization."

In 1995, the state gave the mayor of Chicago authority over the city schools. Mayor Richard M. Daley installed his former budget director, Paul Vallas, in a newly created position: CEO. The Vallas administration brought stability in district leadership and union negotiations, as well as infrastructure improvement to the city's schools. The new administration also enacted tough policies that were designed to improve student achievement. New graduation requirements required all students to take a college preparatory curriculum. Performance standards were enacted for both students and schools based on standardized test scores, with severe consequences for not meeting the expectations. Beginning in 1996, students in eighth grade were required to earn a minimum score on the Iowa Tests of Basic Skills (ITBS) to enroll in high school. In the next year, students in grades three and six had similar promotional requirements. This resulted in 7,000 to 10,000 students retained in grade per year. In addition, schools with large proportions of low-scoring students were put on probation, subjected to intervention, and, in extreme cases, reconstituted. Because of the emphasis on testing and test performance,

In this document, we highlight findings from a larger report that is available at ccsr.uchicago.edu. Here we provide a quick overview of some key trends across the system, which are discussed in more detail in the larger report. The larger report includes additional ways of looking at trends in student performance, as well as information on statistical methodology. It also provides information on some key aspects of school climate and organization that are not included here, particularly changes in the quality of school safety, instruction, professional capacity, and leadership over time.

we refer to this era as "Accountability." When Paul Vallas resigned in 2001 he was replaced by his deputy chief-of-staff, Arne Duncan.

The Duncan administration was characterized by opening many new charter and contract schools, focusing on transforming high schools, closing poorly performing schools, instituting new instructional programs, and working to improve professional development. One of the hallmark policies of the Duncan administration was Renaissance 2010, the plan to open 100 new schools in 10 years. From 2001 to 2009, Chicago saw 155 new schools open and 82 schools close.

The Duncan administration initiated major efforts to improve the use of data at schools, developing mechanisms to provide high schools with timely data reports on students' progress in ninth grade and college outcomes. The Duncan administration pursued various strategies to increase coherency in curriculum, intensify professional development efforts, and raise awareness about the importance of literacy and math through various initiatives. The era was marked by the creation and reorganization of central offices around curricular areas and the provision of math and literacy coaches to support their efforts.

During the Duncan administration, the federal government initiated school-level accountability at the national level through the No Child Left Behind Act. Because this period featured so many different approaches to educational reform, including a large expansion of the number and types of schools in the system, we call the period of the Duncan administration "Diversification." In 2009, Arne Duncan left CPS to become the U.S. Secretary of Education.

Problems with Publicly Reported Statistics

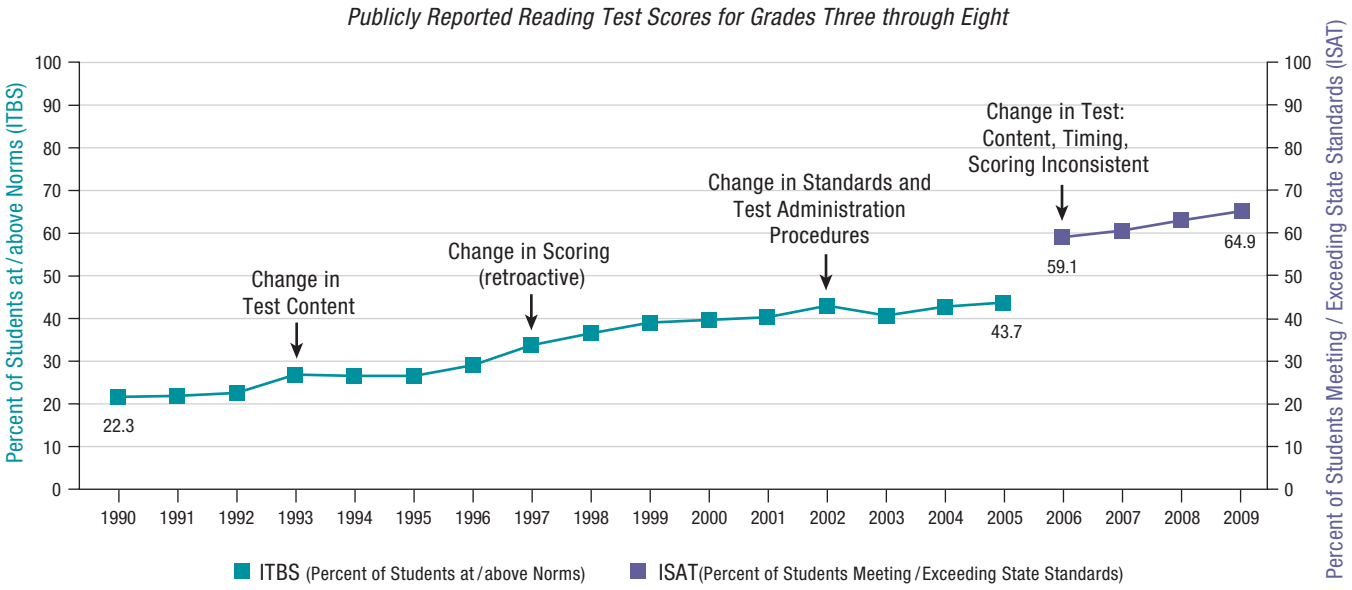
There is an abundance of student- and school-level data designed to provide the public with an account of what is taking place in CPS and in other school districts across the nation. While these data are useful for answering some questions, the publicly reported statistics are not always appropriate for measuring trends over time. This is a critical issue to address because there are increasing calls to use data to make decisions about schools and because substantial resources are being used to develop new data systems. **The data presented in this report have been adjusted to address these issues, so that comparisons over time can be made fairly.** To learn more about how we accounted for issues with the comparability of the statistics, see Chapter 2 in the full report.

The following is a sampling of the problems that had to be resolved in order to compare indicators over time:

- Changes in tests, standards, scoring methods, and test administration make publicly reported test scores non-comparable. A number of changes in tests and testing procedures have occurred since 1990 (see Figure 1), making it difficult to know if changes in test scores are due to changes in real learning or a result of changes in the tests.
- CPS reports the percentage of students who scored at a certain benchmark in a given year; for example, the percentage of students who met state standards in reading or math. Benchmark scores are imprecise metrics that are not useful for measuring change over time. This is because change in the statistic depends more on how many students have scores that are close to the cut-off point than on how much growth in learning actually occurs. If many students have scores close to the cut-off, even small changes in test scores can show large swings in the percentage of students meeting the benchmarks. Similarly, if few students are close to the cut-off point, large changes in test scores may barely affect the percentage of students meeting the benchmarks. The use of benchmark scores, rather than average scores, has led to incorrect assessments of the progress made in CPS over the last 15 years.
- The introduction of grade promotion standards in 1996 affected the movement of students through the elementary/middle grades. Therefore, the composition of students in particular grades changed dramatically. The policy caused many more low-scoring students to spend extra time in grades three, six, and eight, while reducing the number of low-scoring students in grades four and seven in some years. It also led to the lowest-scoring students spending

FIGURE 1

Changes in the tests make the statistics available to the public non-comparable over time and not useful for gauging academic progress



more time in elementary/middle school so they were counted in CPS statistics on test performance for extra years. For example, the lowest-scoring third-graders in 1997 would be counted in third grade averages in both 1997 and 1998 because they did not move on to fourth grade. They would also be included in CPS statistics for seven years instead of six years, which would lower district performance levels.

- Not all students' test scores are counted in district averages in each year. Because of changes in local and federal policies, there were declines and then increases in the proportion of CPS students with reported test scores (see Figure 2). Prior to 2008, students' test scores could be excluded from public reporting depending on their bilingual or special education status. Students who transfer schools mid-year also may not be included in the reported statistics. At the lowest point, only 74 percent of students had their scores reported in school or district averages. Variations in test score reporting rates affect the test score trends because students excluded from reporting tend to have lower scores, on average, than other students.
- The population of students served by CPS changed over time, gradually becoming more Latino (see Figure 3). Changes in the types of students attending CPS could affect test score trends, even if Chicago schools do no better or worse at educating students, because historically there are differences in student achievement by race/ethnicity.

More information about the issues encountered in publicly reported statistics and the methods we used for addressing these problems are available in the full report. The full report also provides further information about inconsistencies in ISAT scoring.

Reading and Math Test Scores in Grades Three through Eight

Across the three eras, elementary/middle school math scores in CPS increased on the standardized tests taken by all third- through eighth-graders in Illinois, while reading scores inched up slightly. However, despite real improvements in math scores and slight improvements in reading scores, the vast majority of CPS students remain so far behind when they enter high school that it is nearly impossible for them to meet standards on the Prairie State Achievement Exam (PSAE), the statewide test for juniors that includes

FIGURE 2

Prior to the federal No Child Left Behind Act, many students' test scores were not included in publicly reported statistics, making statistics reported to the public non-comparable over time

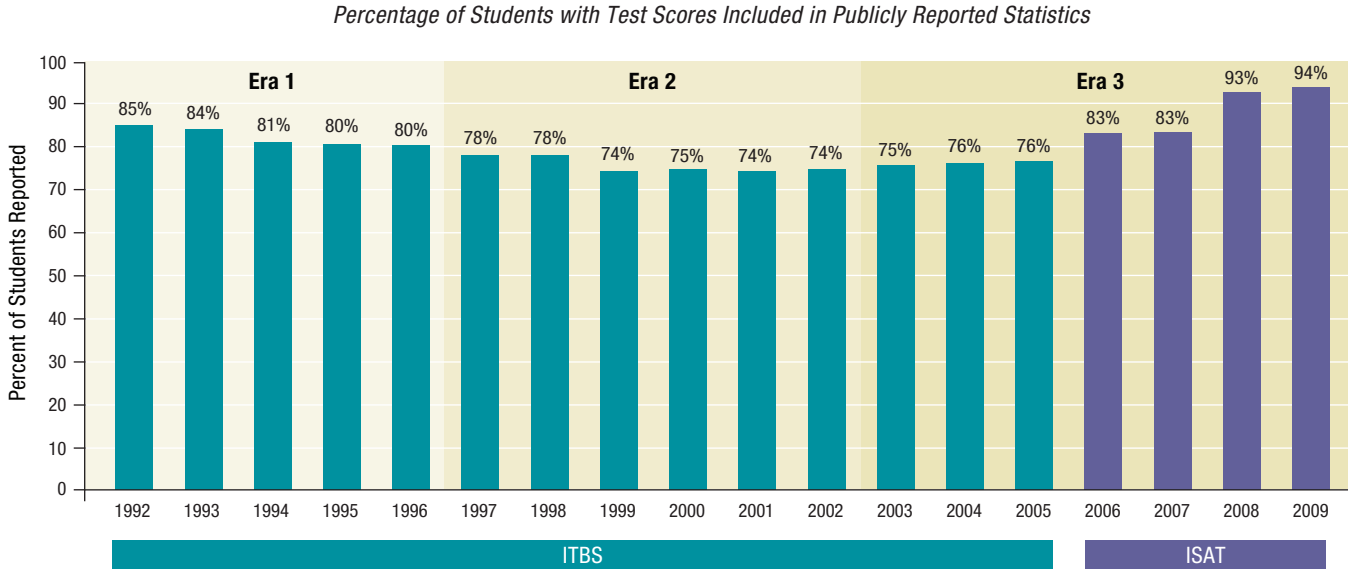
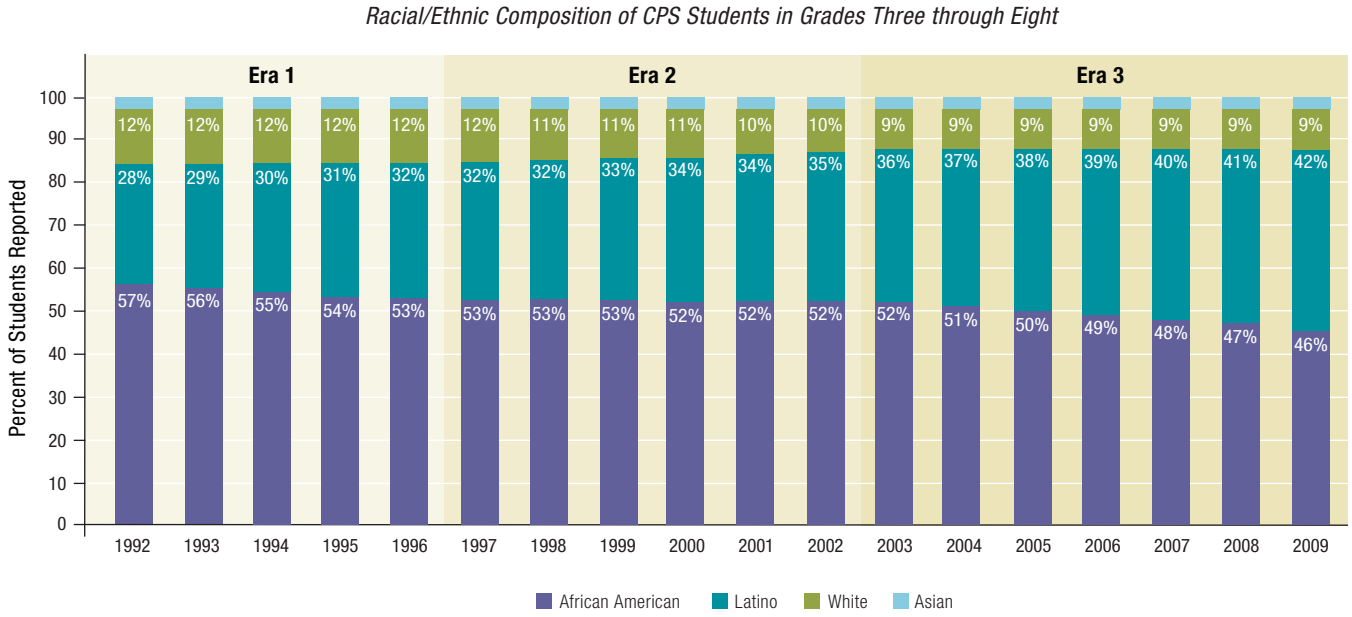


FIGURE 3

The percentage of Latino students has increased across the three eras, while the percentage of African American students decreased



the ACT. These findings, which use statistics that can be compared fairly over time, show trends that are very different from the trends in the publicly reported statistics (such as those shown in Figure 1, on page 7).

In addition, while elementary/middle math and reading scores improved on average, some groups of students improved much less than others. **In every era, the performance gap between African American students and students of other races/ethnicities widened.**

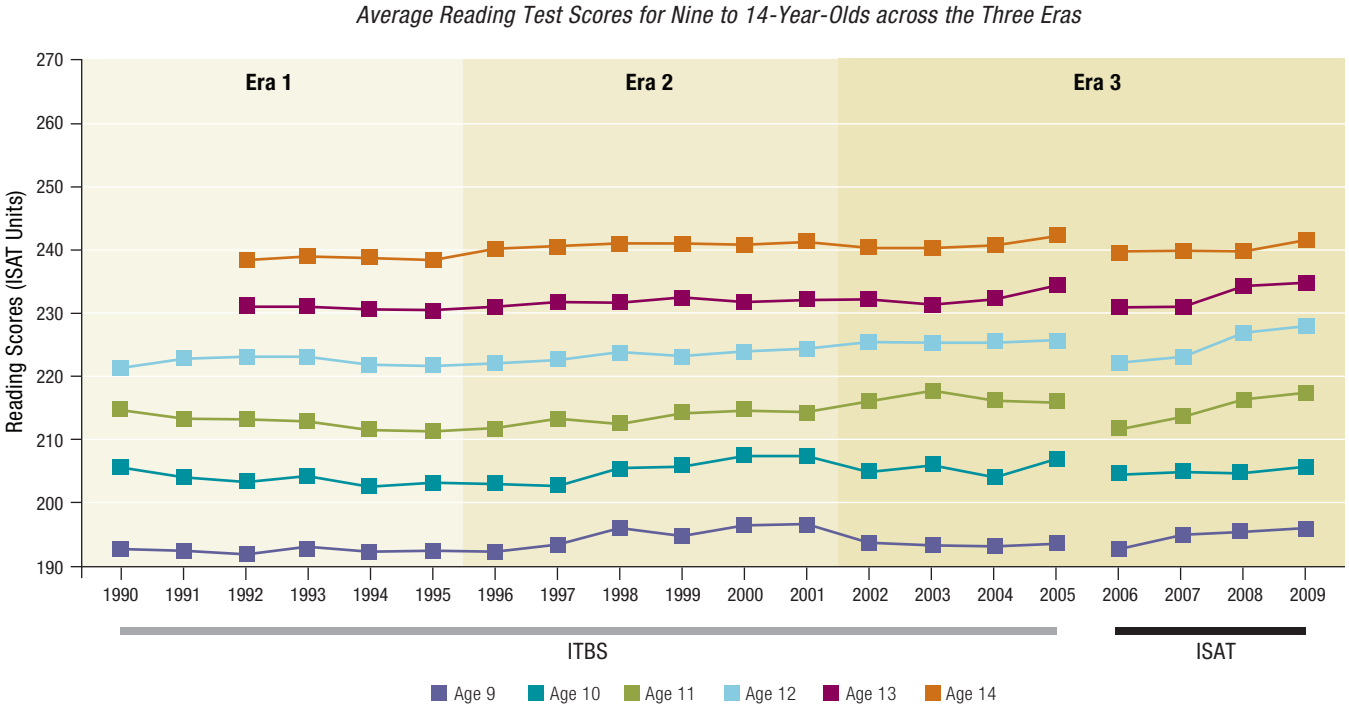
READING test scores rose during Era 2 in the lower grades, but they were flat during the other eras (see Figure 4). While it looks as if reading scores rose at the end of Era 3, our analysis of the 2008 and 2009 tests suggest that this trend resulted from inconsistencies in the way that the statewide test for elementary school students was scored during those years rather than actual improvements in reading skills among CPS students. Indeed, the statewide average and the Chicago average improved at the same rate in 2008 and 2009, providing further evidence that the improvement was likely a result of scoring issues with the statewide test. Reading scores in Chicago were also flat on the national exam, the National Assessment of Educational Progress (NAEP), during the period that students in Chicago took the ISAT.

MATH scores rose in the middle of Era 1, but they fell at the end of the era (see Figure 5). In Era 2 they rose so much that students at some ages had the same average scores as students one year older at the beginning of Era 1. Math scores were flat at the beginning of Era 3, but they showed improvements at the end of the era. In contrast to reading scores, math scores in Chicago improved slightly more than math scores statewide at the end of Era 3, suggesting that part of these gains resulted from real skill improvements among CPS students.

The gains in Era 2, coupled with modest improvement in Era 3, might seem to constitute major progress. However, as shown in Figure 6, the end result is that the average student moved from just below meeting state standards to a level that is still in the bottom half of the

FIGURE 4

Reading scores increased during Era 2, but not in other eras



Note: Data from 1990 to 2005 are ITBS rescaled to the ISAT scale. Data records are not sufficiently accurate at the older ages in the first two years of the study to include in the figure. The trend lines are broken between 2005 and 2006 to indicate the change in tests that were given to students. Students took the ITBS prior to 2006 and the ISAT beginning in 2006. Scores are adjusted for changes in race, gender, and socio-economic level; and for changes in test type, form, and level.

FIGURE 5

Math scores were up in all eras, especially in Era 2

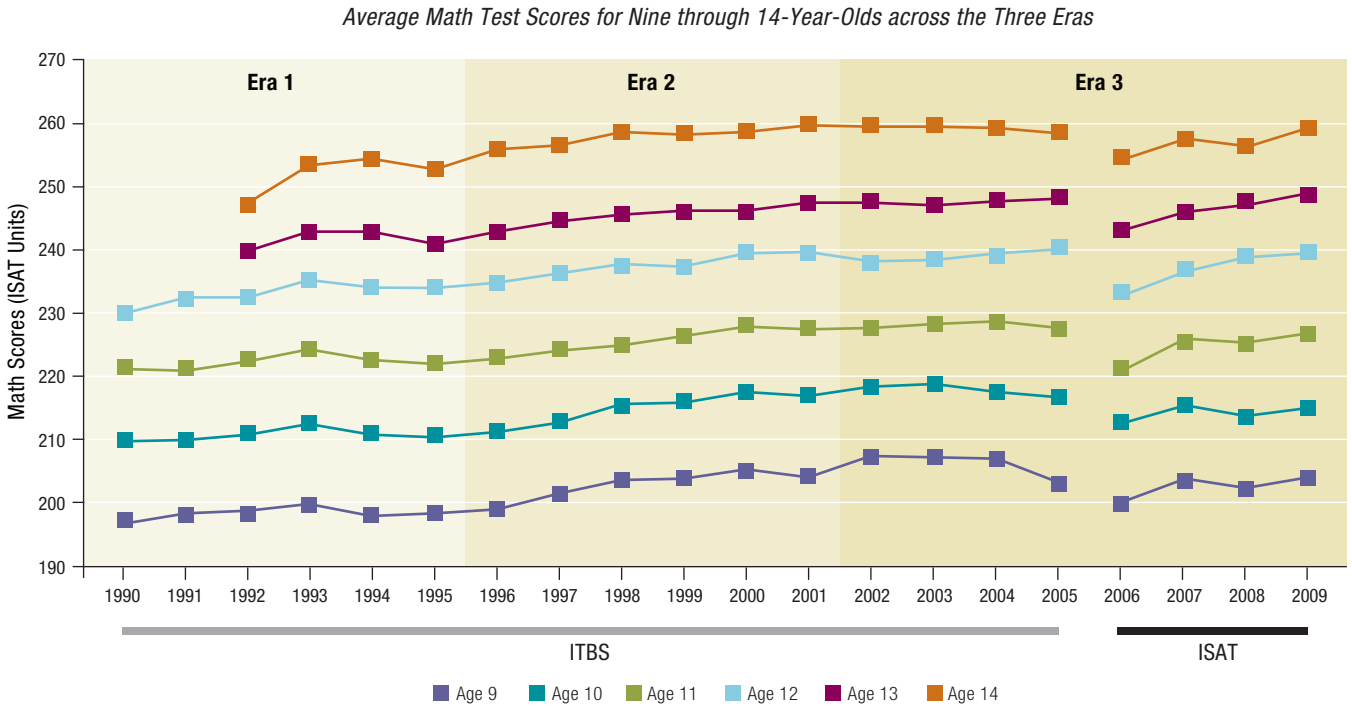


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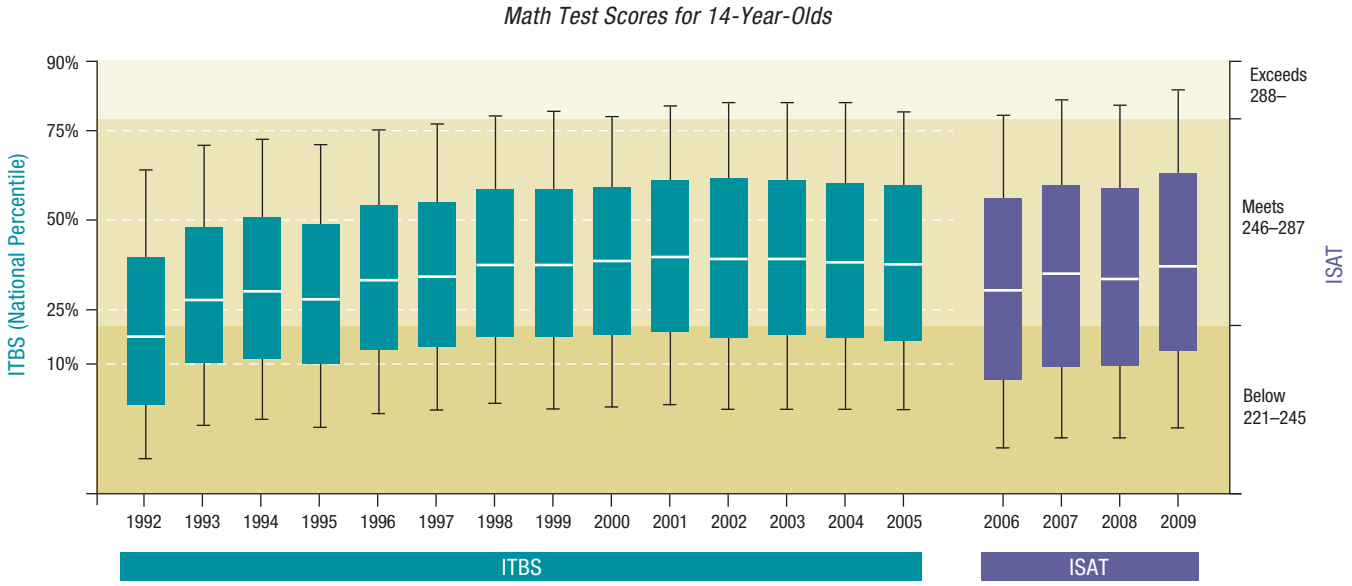
FIGURE 6

Math test scores improved all along the range of scores, not just at the top or bottom



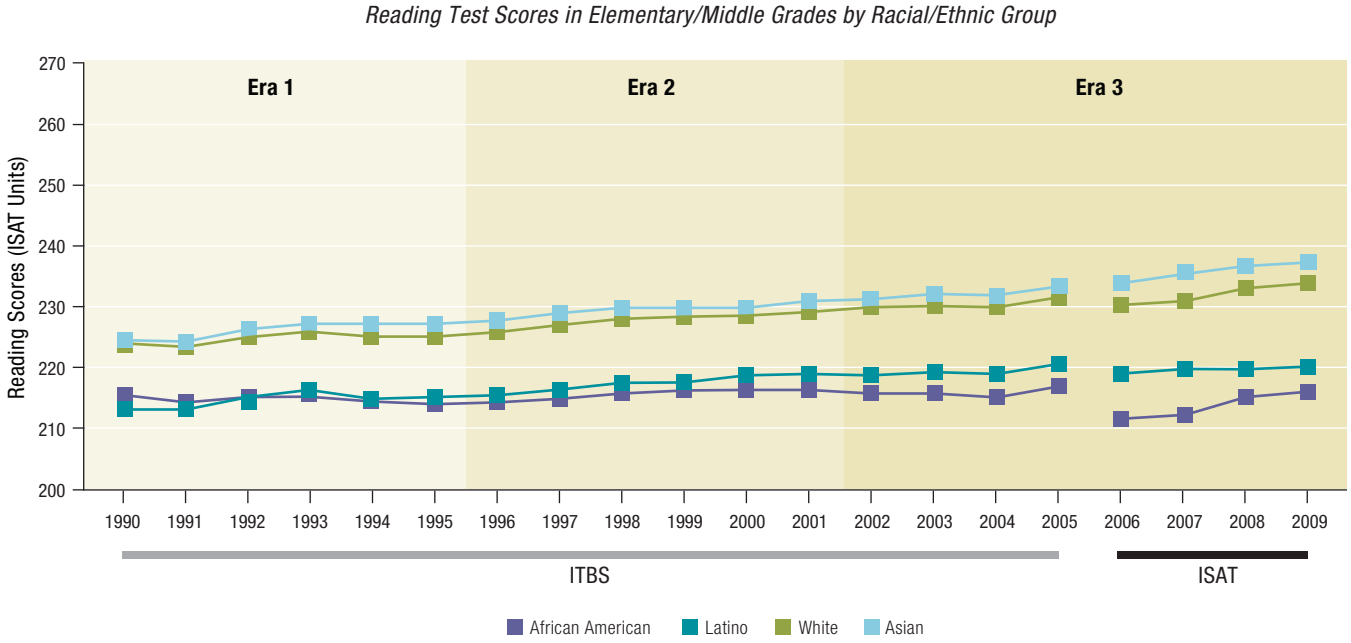
Note: This figure shows the overall distribution of math scores for students in one age group: 14-year-olds. ITBS national percentile ranks and ISAT performance levels are indicated on the vertical axis. The dashed white lines indicate the ITBS national percentile ranks; the ISAT performance levels are shown by the background shading. The boxes show the distribution of math scores by 14-year-olds. The horizontal bar in the middle of the box indicates the median (50th percentile point); the top and bottom of each box are the 75th percentile and 25th percentile, respectively. The top and bottom of the "whiskers" extending from each box indicate the 90th and 10th percentile, respectively. Note that the percentiles given by the boxes pertain to 14-year-olds in CPS, not to national percentiles.

"meets standards" category. This is a problem because the state sets a very low bar for meeting standards in elementary/middle school. In fact, eighth grade students at the very top of the "meets" category have only about a 60 percent chance of getting a 20 or above on the ACT three years subsequent.[1] Meanwhile, only about one-quarter to one-third of students in the low/middle region of the "meets" category reach the 20 point mark on the ACT three years later. Thus, the typical CPS eighth-grader will need to show extraordinary learning gains in high school to have test scores expected for college by the time he or she graduates.

- Reading and math scores grew more for Asian, White, and Latino students than for African American students.
  - Reading scores improved slightly among all racial/ethnic groups, except African American students (see Figure 7). The average reading score for African Americans in 2009 was very close to the average score in 1990.
  - Math scores rose considerably among Asian, White, and Latino students but modestly among African American students (see Figure 8).
  - While Latino and African American students had the same average math and reading scores in 1990, Latino students' scores were significantly higher than African American students' scores by 2009.
  - The widening of the gap in reading and math scores between White and African American elementary grade students in Chicago was larger than seen in national trends. On the national NAEP exam, fourth grade racial gaps closed substantially over the course of the three eras in both reading and math, while eighth grade gaps were not consistently up or down.[2]
  - Math and reading scores also increased more among White and Asian students than among Latino students.

FIGURE 7

Reading test scores did not improve among African American students; they improved slightly for other groups



Note: The decline in scores in 2006 is a result of the change in tests and the lack of familiarity with the new test format, as described in the full report. Trends from 2006 through 2009 could not be adjusted for changes in ISAT scoring and do not seem to reflect real changes in skills. See the full report for more details.

- In Eras 1 and 3, schools that started off with the lowest levels of achievement—those that most needed to improve—were the least likely to show substantial improvements in either reading or math. Integrated schools, in which at least 30 percent of the students were White or Asian, were the most likely to show improving test scores in all eras, especially in Era 3.

High School Test Scores

Since 2001, eleventh-graders in Illinois high schools have been required to take the ACT as part of the Prairie State Achievement Exam each spring. In general, ACT scores in CPS have been improving. However, average scores are still far below levels that would make students eligible for admission at most four-year colleges.

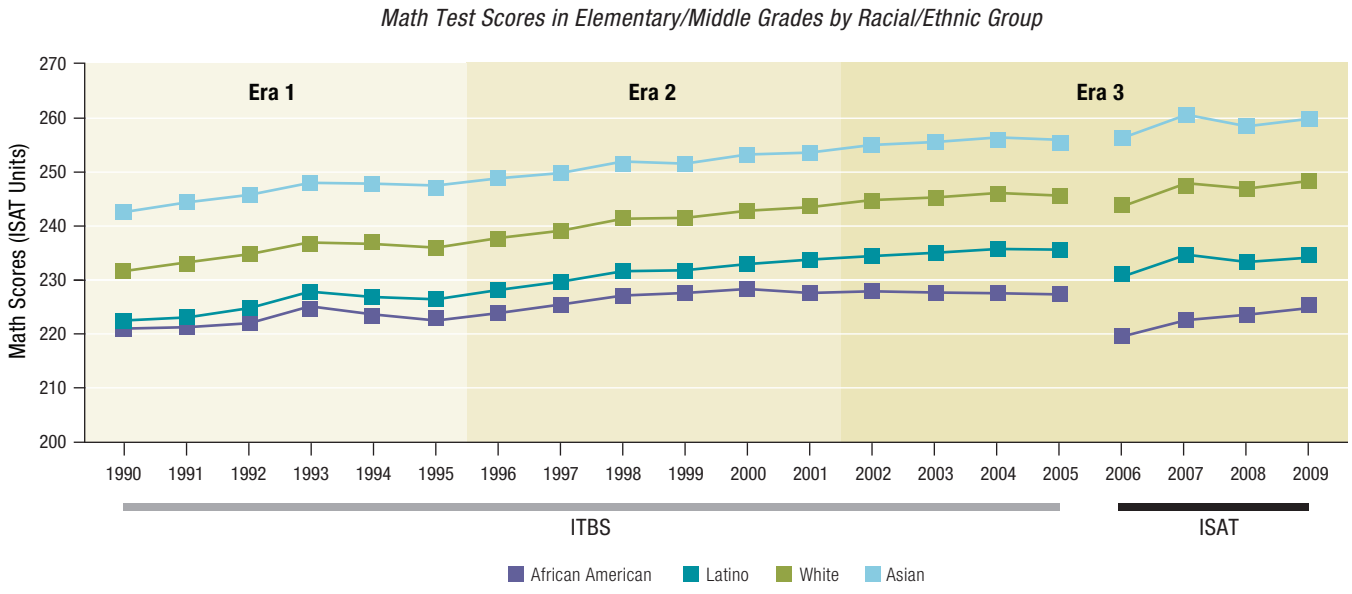
During Era 3, the percentage of CPS freshmen who took the ACT within three years of entering high school increased considerably, from 58 percent of students entering in fall 2000 to 69 percent of students entering in 2006. More students were making it through the first three years of high school to take the ACT on time; fewer students had dropped out or failed to make expected grade progression. At the same time, ACT scores increased by a full point between 2001 and 2009, from an average of 16.2 to 17.2 (see Figure 9). Improvements in ACT scores occurred despite no improvements in the achievement level of students entering CPS high schools. The EXPLORE scores from tests that students take as they enter high school did not improve, while the ACT scores rose (see Figure 9).

Despite this steady increase, the average score remains far below college-readiness benchmarks. ACT has established a benchmark college-readiness score of 21 for the composite score; students scoring at this level have a fifty-fifty chance of getting at least a B in entry-level college classes, according to the ACT. White and Asian students in CPS have average scores that are about at this level, but the scores of Latino and African American students are substantially below the benchmark scores. The full report provides more information about ACT scores and college-readiness levels.[3]

As with the elementary/middle school scores, high school test scores did not improve uniformly across all racial/ethnic groups.

FIGURE 8

While math test scores of all students rose, improvements were smallest among African American students

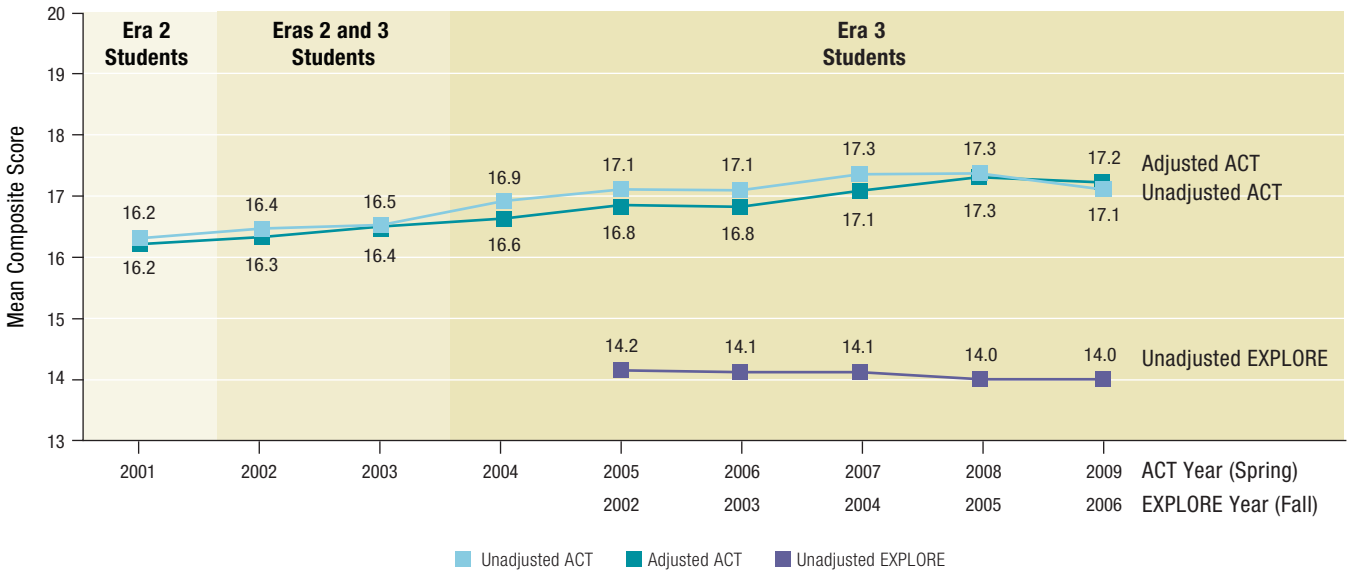


Note: The decline in scores in 2006 is a result of the change in tests and the lack of familiarity with the new test format, as described in the full report. Trends from 2006 through 2009 could not be adjusted for changes in ISAT scoring and exaggerate real changes in skills. See the full report for more details.

FIGURE 9

Eleventh grade ACT scores have been rising, even though entering ninth grade EXPLORE scores have been flat

ACT Scores and EXPLORE Scores, 2001–2009

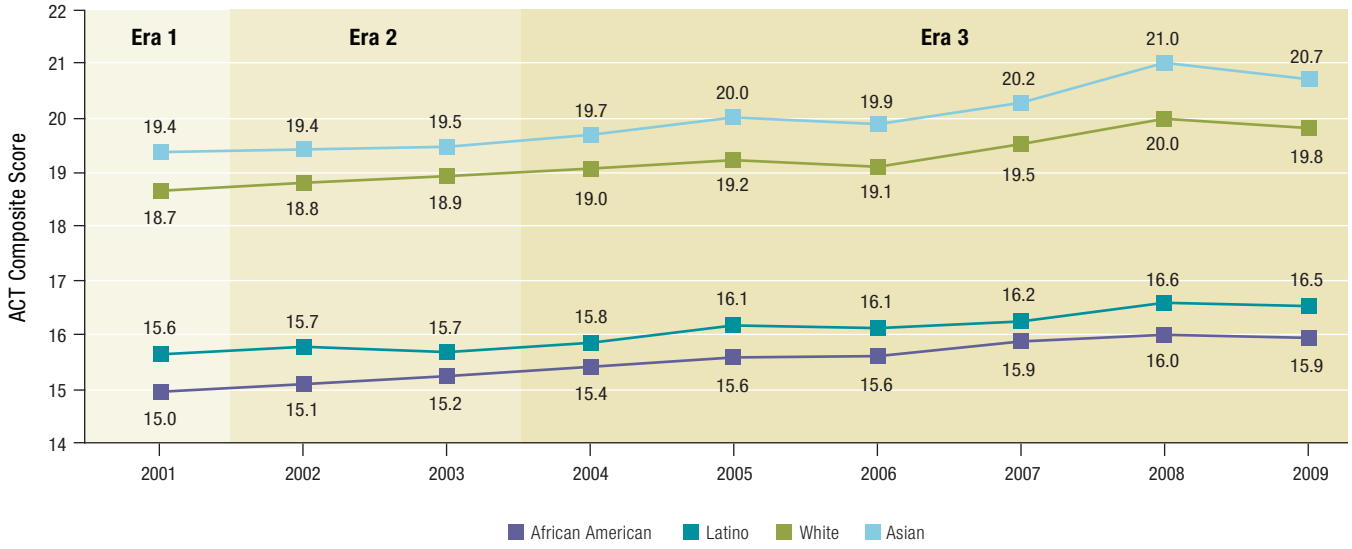


Note: Adjusted ACT scores control for changes in student body composition, compared to 2001, in terms of students' race, gender, and socio-economic level. EXPLORE is taken in October of the ninth grade year and can be used as a measure of students' academic skills as they begin high school. The average EXPLORE score for the ninth grade cohort that is displayed corresponds with on-time test-taking for the ACT year. For example, if a student was taking the ACT on time (i.e., in their third year) in 2005, they would have taken EXPLORE in fall 2002. The EXPLORE value then is the average ninth grade EXPLORE score for all the students who were first-time freshmen in 2002. Similar trends are observed if we only include the EXPLORE scores for students who made it to the end of the eleventh grade to take the ACT, although the averages are somewhat higher.

FIGURE 10

ACT scores improved among students of all races/ethnicities

ACT Scores by Student Race/Ethnicity



Note: ACT scores by race/ethnicity are adjusted for entering achievement, gender, and neighborhood poverty and social status.

- While scores grew for students of all races/ethnicities, the scores of White and Asian students increased more than those of African American or Latino students (see Figure 10).
- Scores grew in all types of schools during Era 3, but the largest improvements occurred in selective enrollment high schools, and racially integrated schools (those where at least 30 percent of students are White or Asian).

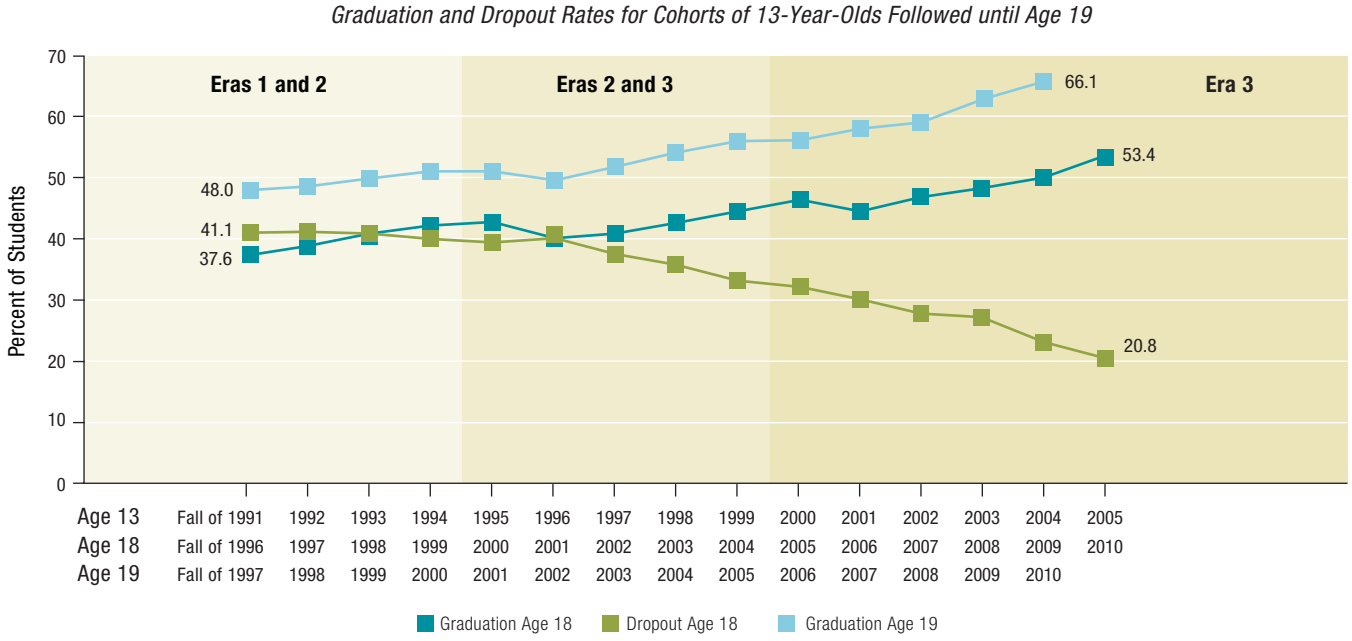
Graduation and Dropout Rates

A sustained improvement in graduation rates and a concurrent decline in dropout rates constitute the most striking and positive findings of this report. Chicago's graduation rates increased substantially over the course of the three eras. CPS students who were 13 years old in the fall of 1991 were about as likely to drop out by age 18 as they were to graduate. In many high schools, dropout rates were higher than graduation rates. Fourteen years later, CPS students who were 13 years old in 2005 were more than twice as likely to graduate by age 18 than to drop out. Two-thirds of CPS students now obtain regular CPS diplomas by age 19, compared with less than half of students at the beginning of Era 1.[4]

Graduation rates are usually reported for groups of students based on the year they enter high school, and such rates are available in the larger report. However, these rates are problematic for examining trends over time, as they can fluctuate with changes in grade promotion policies (e.g., delaying when students enter ninth grade), creation of new schools with irregular grade structures (e.g., middle schools with grade nine), and changes in the percentage of students who drop out prior to ninth grade. For these reasons, we present graduation rates by age group—following students from age 13 until age 19. These rates are more inclusive and are not affected by irregular grade progression among students or grade structure among schools.

FIGURE 11

Graduation rates improved dramatically, especially during Era 3



Note: This figure tracks graduation and dropout rates for cohorts of students from age 13 until ages 18 and 19. Points from different lines at the same point on the horizontal axis show outcomes for students from the same cohort, but at different ages. Graduation rates are computed by tracking students over multiple years; therefore, they may have been 13 years old in one era and 19 years old in another era. These statistics include students who transferred into CPS after age 13 and incorporate them into the corresponding age cohort. Students who left CPS through a school transfer, institutionalization, or death are not included in the calculation of the statistics.

- Students who were 13 years old in 1991 were more likely to drop out than to graduate by age 18, as shown in Figure 11 (41 percent versus 38 percent). By comparison, among students who were 13 in 2005, the last group of students with data through age 18, 20.8 percent had dropped out by age 18 and 53.4 percent had graduated by the age of 18.
- Less than half of the 1991 cohort had graduated by the time they were 19 in 1997. In contrast, 66 percent of the 2004 cohort of 13 year olds graduated by the time they were 19 in 2010.
- Graduation rates for girls were substantially higher than for boys, among students of all races/ethnicities (see Figures 12 and 13). However, both boys and girls showed substantial improvements in graduation rates over the three eras.
- Graduation rates for African American students are the lowest and grew the least of all racial/ethnic groups. However, graduation rates still improved considerably. Among students who were 19 years old in 2010, half of African American boys and nearly 70 percent of African American girls graduated. In 1997, by comparison, 35 percent of African American boys and 53 percent of African American girls graduated by age 19.

FIGURE 12

Graduation rates have improved dramatically, but remain low for boys

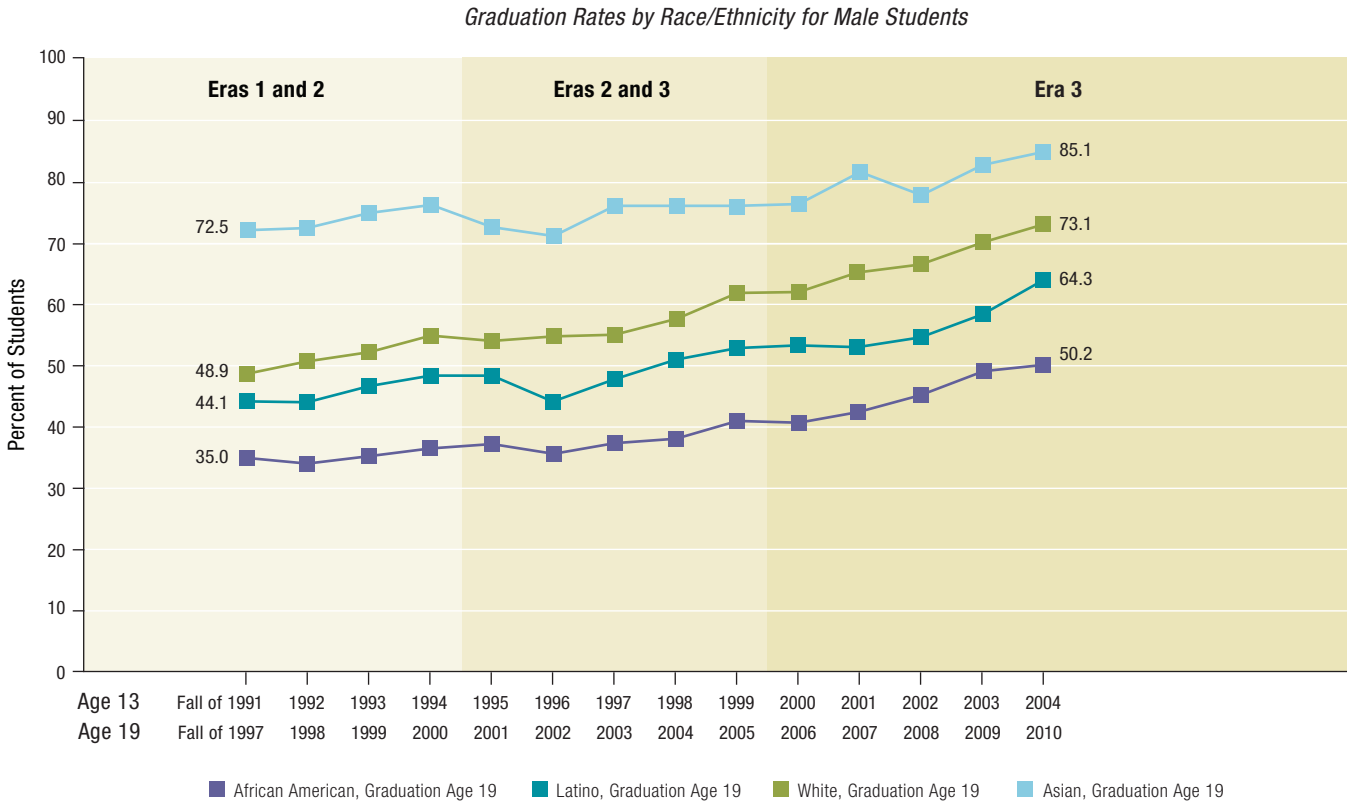
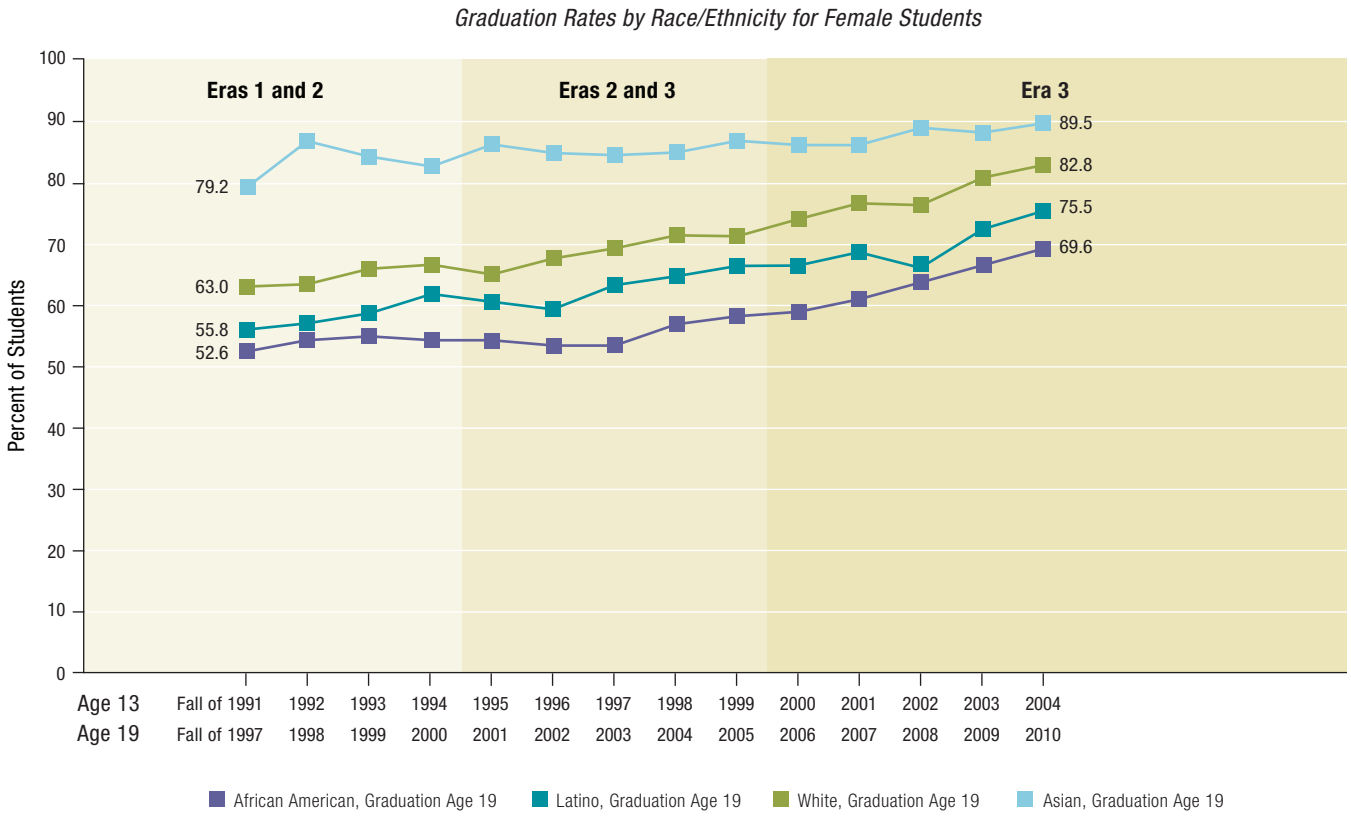


FIGURE 13

Girls graduated at much higher rates than boys in all racial/ethnic groups



Conclusion

Interpretive Summary and Areas for Further Study

Chicago schools are not what they were in 1990. Graduation rates have improved tremendously, and students are more academically prepared than they were two decades ago. ACT scores have risen in recent years, and elementary math scores are almost a grade level above where they were in the early 1990s. However, average elementary school test scores remain well below levels necessary for doing college preparatory work in high school. High schools have little chance of preparing students for college when they enter ninth grade with extremely low skill levels. In fact, despite some improvements in test gains in the high schools, average high school test scores remain well below levels that indicate students are likely to succeed in college. This is not a problem that is unique to Chicago. Nationwide, the typical high school graduate also fails to perform at college-ready levels. Students with similar economic and ethnic backgrounds at other schools in Illinois actually tend to perform worse than Chicago students. However, the district has a long way to go before the average student graduates ready to succeed in college.

Era 1, the era of decentralization when schools were given the latitude to formulate and execute their own improvement strategies, was a baseline period for this study. Our data sources begin to provide good information in the middle of the era; thus, it is difficult to gauge the extent to which students' achievement improved under decentralization. However, there were at least modest improvements in both elementary and high schools during Era 1. Graduation rates were very low, but improving. And math scores rose in the elementary grades, although they flattened in the end of the era.

Other research at CCSR has documented the unevenness in school improvement under decentralization; during decentralization the schools serving students from the most economically disadvantaged communities were least likely to improve, while the schools serving more advantaged communities were most likely to improve.[5] These outcomes can be explained by differences in the social resources available in school communities. Because decentralization placed power in the hands of elected Local School Councils, it is not surprising that communities where residents were active in local organizations and where schools faced fewer social problems were more likely to show improvements.

Era 2 was an era of strict test-based accountability measures and bold initiatives that were enacted to transform high schools (e.g., changing graduation requirements so that all students took a college preparatory curriculum). There were large investments in infrastructure and stability in district leadership. Test scores in the elementary/middle grades rose during this period, and they improved in schools serving students of all types of backgrounds. This was the only era to show large improvements in the lowest-achieving schools. Prior CCSR studies have found that the test-based accountability policies, which held schools accountable for improvements in test scores and required students to pass tests to be promoted from certain grades, had mixed results for students.[6] They encouraged teachers and parents to provide more support to the lowest-achieving students, and they encouraged better alignment of instruction to grade-level standards. At the same time, they resulted in a narrowing of the curriculum to focus on tested subjects (reading and math), more instructional time spent on test-taking practice, and a large increase in grade retention in the elementary schools. Test-based promotion policies resulted in more students entering high school who were old for their grade level; this had a depressing effect on graduation rates.[7] In fact, the improvements in graduation rates that had been occurring in Era 1 were set back in Era 2. This dip occurred, in part, because of the increase in grade retention and also because of the change in graduation requirements that ended remedial coursework and required all high school students to take a college preparatory curriculum.[8]

In Era 3, there were large improvements in outcomes in the high schools and very little improvement in the elementary schools. Improvements that had been occurring in graduation rates accelerated, and were seen in all types of schools, among boys and girls and all racial/ethnic groups. At the same time, scores on the ACT rose, even though students were not entering high school better prepared. Students were learning more while in high school. In the elementary grades, test scores dropped—especially in the lowest-performing schools. Equity declined, so that schools serving African American students, and those that started out the era with the lowest levels of performance, were less likely than more advantaged schools to have improving test scores.

While the effects of the dominant policies of Eras 1 and 2 are largely understood, much research remains to be done to understand both the positive and problematic effects of the policies in Era 3. The decline in equity, with African American students falling further behind students from other racial/ethnic groups, is particularly disturbing and has raised questions about policies that disproportionately affected African American students (e.g., the decision to close chronically low-performing schools and send students to other schools). One CCSR study showed no improvements in test scores for students who were displaced by school closings,[9] but there is yet to be an analysis of the overall effect of the policies on all students and schools. Another area requiring more study is the rise in student performance in the high schools. Era 3 brought a much greater use of data in the high schools to track students and provide targeted support for passing classes and college readiness. Further research should investigate whether this use of data led to the improved outcomes and, if so, exactly how it happened.

The findings in this report contradict common perceptions about district performance over the last two decades. It has been widely believed that elementary schools have improved considerably, while high schools have stagnated. In fact, the opposite is true. These misperceptions arise because of problems with the metrics that are used to judge school performance, and differences in the standards by which high schools and elementary schools are held accountable. High schools are increasingly being

judged by college-ready standards, particularly by college-ready benchmark scores on the ACT. The benchmark score on the ACT-aligned EXPLORE exam that students take at the beginning of high school corresponds to much higher skill levels than the "meets standards" benchmark on the spring eighth grade ISAT exam. Thus, it appears that high schools are less successful when, in fact, they are simply held to a much higher standard. This problem is accentuated by focusing on benchmark scores rather than averages—few students are close to meeting the high school benchmarks on the ACT, so it looks like there has been little movement when there has been growth. A further reason for misperceptions about elementary school performance comes from non-equivalent tests, scoring, and test administration procedures over time. These changes have often led scores to look like they are improving when, in fact, skill levels have remained the same.

This report raises important questions about how much improvement we can reasonably expect in a large system over the span of two decades. A number of dramatic system-wide initiatives were enacted over the course of the three eras of school reform. But instead of catalyzing dramatic changes in student achievement, district-wide changes were incremental—when they occurred at all. Meanwhile, throughout the three eras, individual schools did manage to make substantial improvements. Past research at CCSR suggests that the process of school improvement involves careful attention to building the core organizational supports of schools—leadership, professional capacity, parent/community involvement, school learning climate, and instruction.[10] In fact, schools that are strong in at least three of these five areas are 10 times more likely to improve than schools that are weak. Building the organizational capacity of schools takes time and is not easily mandated at the district level. Nevertheless, the extent to which the next era of school reform drives system-wide improvement will likely depend on the extent to which the next generation of reforms attends to local context and the capacity of individual schools throughout the district.

Endnotes

Summary of Key Findings

1. Easton, J.Q., S. Ponisciak, and S. Luppescu (2008). *From high school to the future: The pathway to 20.* Chicago: Consortium on Chicago School Research.
2. Analysis based on publicly available NAEP data. Department of Education. Institute of Education Sciences. National Center for Education Statistics (11/05/2002). "National Assessment of Educational Progress (NAEP) Data Files." (http://hdl.handle.net/1902.5/609759) National Archives and Records Administration.
3. Also see: Roderick, M., J. Nagaoka, and E.M. Allensworth (2006). *From high school to the future: A first look at Chicago Public School graduates' college enrollment, college preparation, and graduation from four-year colleges.* Allensworth, E.M., M. Correa, and S. Ponisciak (2008). *From high school to the future: ACT preparation—too much, too late.*
4. Our calculations only include students who enter CPS through regular (non-alternative) schools. Students who leave a regular school and enter an alternative school are counted as dropouts. Students who never enrolled in a regular CPS school are not included in the calculations.

Conclusion

5. Bryk, A.S., P. Bender Sebring, E.M. Allensworth, S. Luppescu, and J.Q. Easton (2010). *Organizing schools for improvement: Lessons from Chicago.* Chicago: University of Chicago Press.
6. Roderick, M., and J. Nagaoka (2005). Retention under Chicago's high-stakes testing program: Helpful, harmful, or harmless? *Education Evaluation and Policy Analysis*, 24(4), 309–40; Allensworth, E.M., and J. Nagaoka (2010). "The effects of retaining students in grade with high stakes promotion tests." Chapter 20 in J. Meece (ed.), *Handbook on Schools, Schooling, and Human Development*, Taylor and Francis.
7. Allensworth, E.M. (2005). Dropout rates after high-stakes testing in elementary school: A study of the contradictory effects of Chicago's efforts to end social promotion. *Educational Evaluation and Policy Analysis*, 27(4).
8. Montgomery, N., and E.M. Allensworth (2010). *Passing through science: The effects of raising graduation requirements in science on course-taking and academic achievement in Chicago.* Chicago: Consortium on Chicago School Research.
9. De la Torre, M., and J. Gwynne (2009). *When schools close: Effects on displaced students in Chicago Public Schools.* Chicago: Consortium on Chicago School Research.
10. Bryk, A.S., P. Bender Sebring, E.M. Allensworth, S. Luppescu, and J.Q. Easton (2010). *Organizing schools for improvement: Lessons from Chicago.* Chicago: University of Chicago Press.

About the Authors

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