

Education Watch

THE NATION

Key Education Facts and Figures

Achievement, Attainment and Opportunity
From Elementary School through College



Prepared by the Education Trust, Inc.

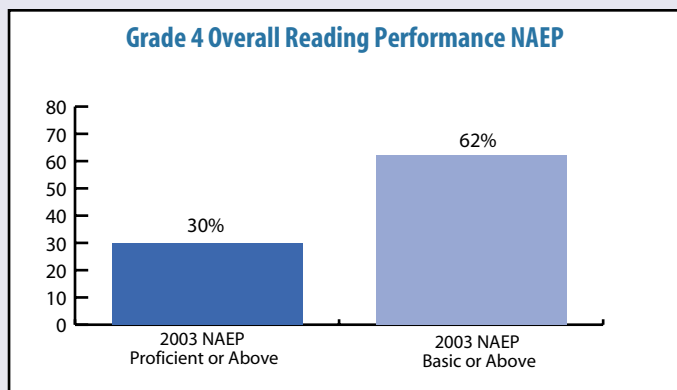
Spring 2004



Perhaps the most important task of elementary schools is to teach students to read well. Strong reading skills are the key to later success both in school and in life.

The following charts show the nation's fourth-grade reading performance on the most recent administrations of the National Assessment of Educational Progress (NAEP). Results are reported below as the proportion of students reading at different performance levels. The goal is for every student to reach at least "proficient."

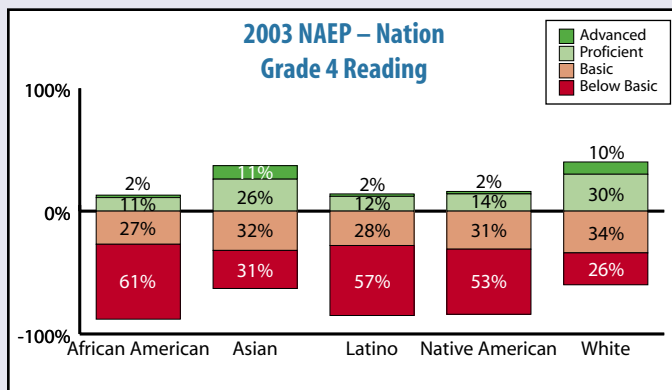
Are students proficient in reading?



The bar on the left shows the percentage of fourth-graders nationally who score at or above the proficient level on the 2003 National Assessment of Educational Progress in reading. The bar on the right represents the percentage who perform at least at the basic level.

Do results vary by group?

It's also important to look underneath overall averages to see how different groups of students are performing. By looking at achievement data by group, we can draw attention to the students who need the most help. The charts below show the distance each group has to go in order to reach the proficient level on on NAEP.



Is NAEP performance improving?

Grade 4 Reading

	NAEP Scale Score		Change from 1998-2003	
	1998	2003	State Change	Biggest Gainers
African American	192	197	6	22 (DE)
Asian	211	225	13	19 (MA)
Latino	192	199	8	33 (DE)
Native American	N/A	202	N/A	8 (AZ)
White	223	227	4	15 (DE)
All	213	216	4	17 (DE)

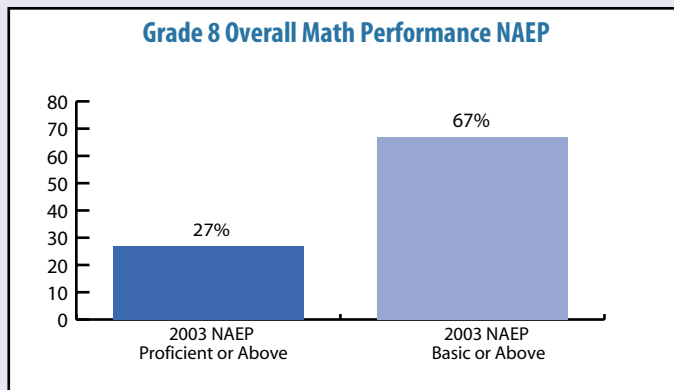
This table shows the amount of progress the nation made on NAEP with each group of fourth-graders. The last column shows the amount of progress made by the biggest gaining state for that group over the same period of time.

Note: A difference of 10 points is roughly equivalent to one year's worth of learning.

To survive in our information society, all Americans need a solid foundation in mathematics. Middle schools play a central role in assuring that students have not only mastered basic computation, but are also developing the mathematical thinking and problem-solving skills that are so important in the mathematics courses they will take in high school.

As we showed with reading on the previous page, the following charts compare the nations' eighth-graders' mathematics performance on the most recent administration of the National Assessment of Educational Progress (NAEP). Results are reported as the proportion of students at different performance levels. The goal is for every students to reach at least "proficient."

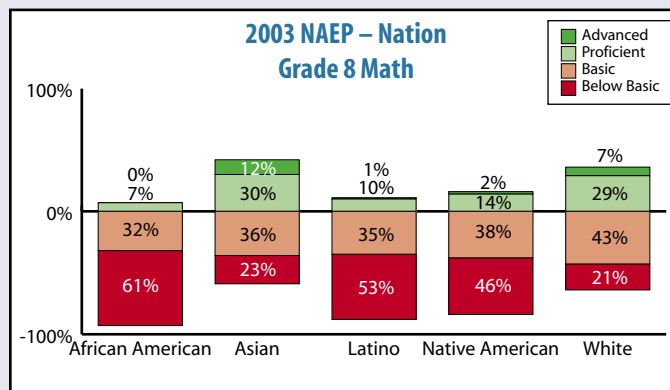
Are students proficient in mathematics?



The bar on the left shows the percentage of eighth-graders scoring at or above the proficient level on the National Assessment of Educational Progress in mathematics. The bar on the right shows the percentage who perform to at least the basic level.

Do results vary by group?

It's also important to look underneath overall averages to see how different groups of students are performing. By looking at achievement data by group, we can draw attention to the students who need the most help. The charts below show the distance each group has to go in order to reach the proficient level on NAEP.



Is NAEP performance improving?

Grade 8 Mathematics

	NAEP Scale Score		Change from 1996-2003	
	1996	2003	State Change	Biggest Gainers
African American	241	252	10	19 (WA)
Asian	N/A	289	N/A	27 (MA)
Latino	250	258	8	20 (DC)
Native American	N/A	265	N/A	15 (WY)
White	280	287	6	18 (SC)
All	271	276	6	17 (SC)

This table shows the amount of progress the nation made with each group of eighth-graders on NAEP. The last column shows the amount of progress made by the biggest gaining state for that group over the same period of time.

Note: A difference of 10 points is roughly equivalent to one year's worth of learning.

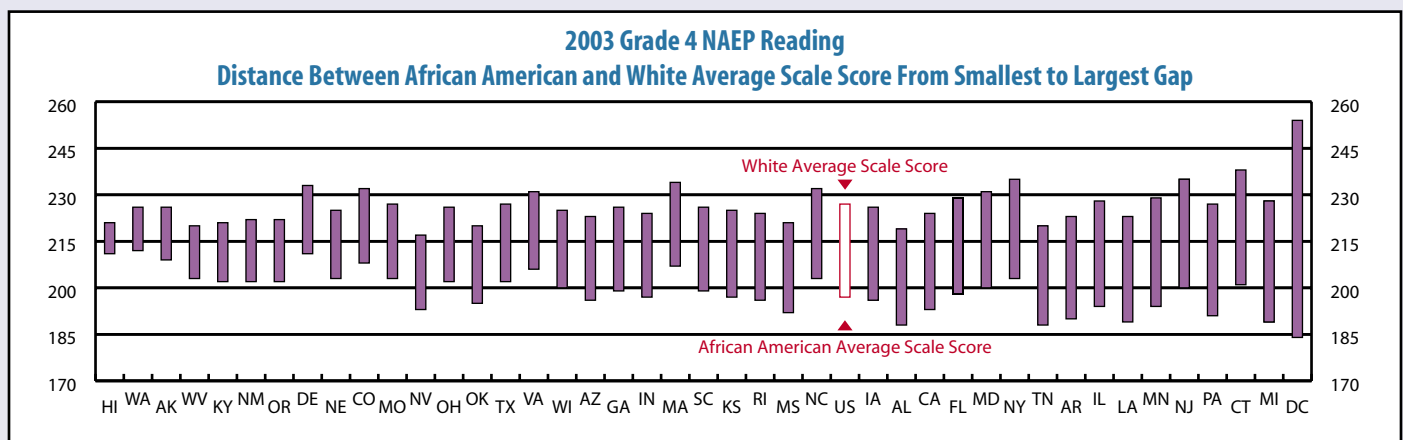
The win-win pattern most Americans will want to see is rising student achievement combined with narrowing gaps between student groups. On these pages, we show where each state and the nation are in meeting this two fold goal with respect to African American, Latino and low-income students. A complete picture of how the nation and your state are doing with all groups can be found on Ed Watch Online at www.edtrust.org.

Readers should note that progress on one part of the goal does not necessarily mean progress on the other. For example, a state can have a narrow achievement gap between white and minority students, but the achievement levels of both groups are low. Likewise, minority achievement can be high relative to other states, but low in relation to white achievement in their own state, leaving a large gap. The best situation is progress on both fronts.

NAEP Grade 4 Reading

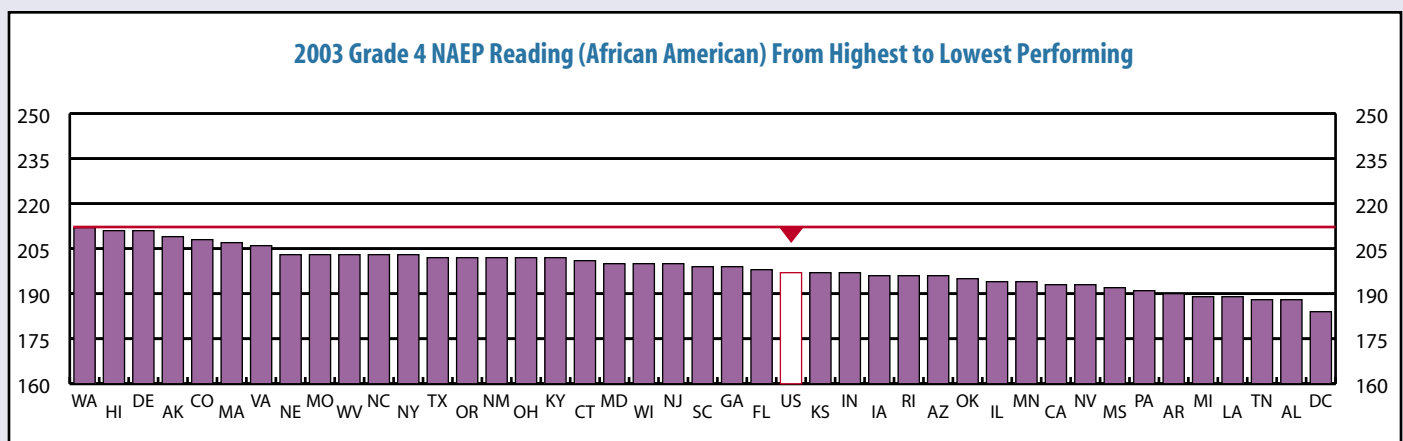
How does the African American-White achievement gap compare across states?

The chart below shows the reading achievement gap between African American and white fourth-graders on NAEP. The top of each bar represents the average scale score for white students and the bottom is that for African American students.



How do African American scores compare across states?

Some states are far more successful teaching minority and low-income students than others. Indeed, the achievement gap between students of the same group in high- and low-performing states is often larger than the gap between white and minority or poor and nonpoor students within a state. The following chart shows the average scale scores of African American fourth-graders across states.

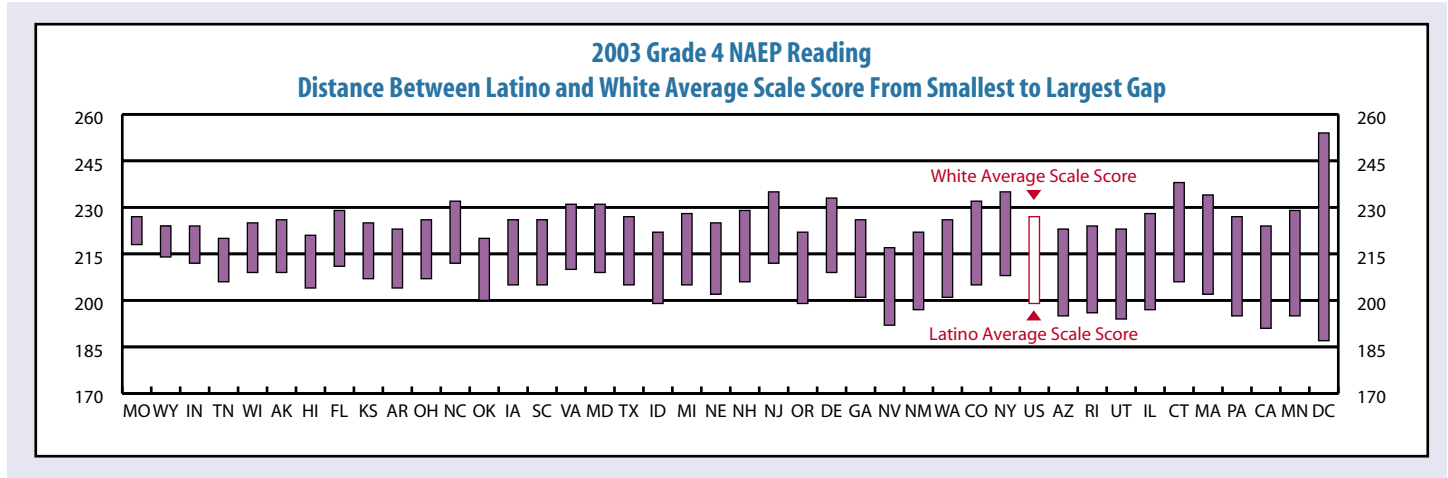


QUESTIONS to think about: How does the performance of this group of students in your state compare across states? How does the gap size compare across states?

NAEP Grade 4 Reading

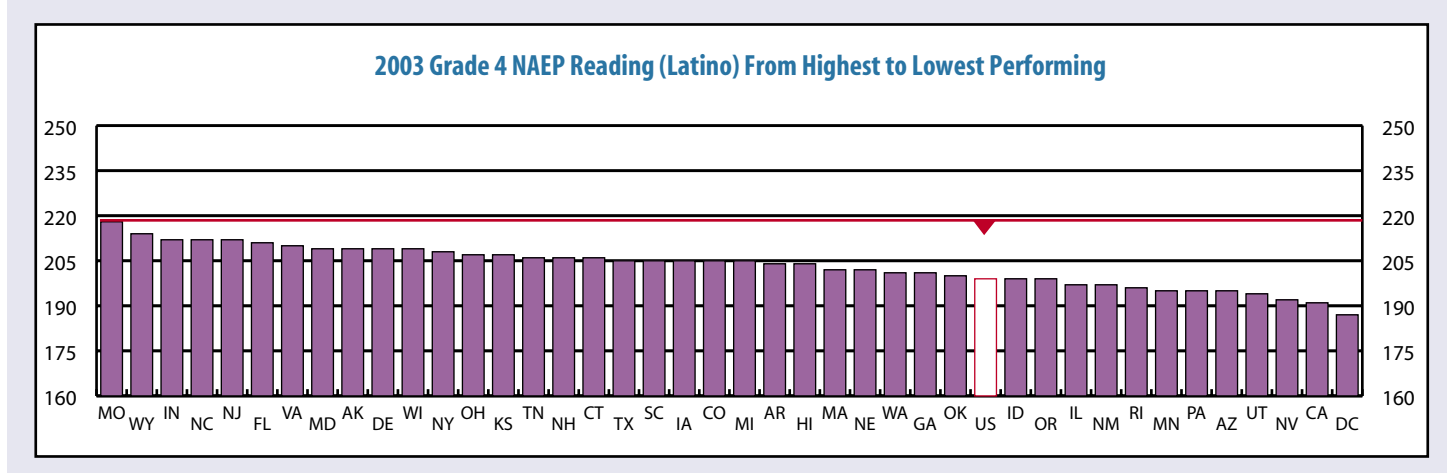
How does the Latino-White achievement gap compare across states?

The chart below shows the reading achievement gap between Latino and white fourth-graders on NAEP. The top of each bar represents the average scale score for white students and the bottom is that for Latino students.



How do Latino scores compare across states?

Some states are far more successful teaching minority and low-income students than others. Indeed, the achievement gap between students of the same group in high- and low-performing states is often larger than the gap between white and minority or poor and nonpoor students within a state. The following chart shows the average scale scores of Latino fourth-graders across states.

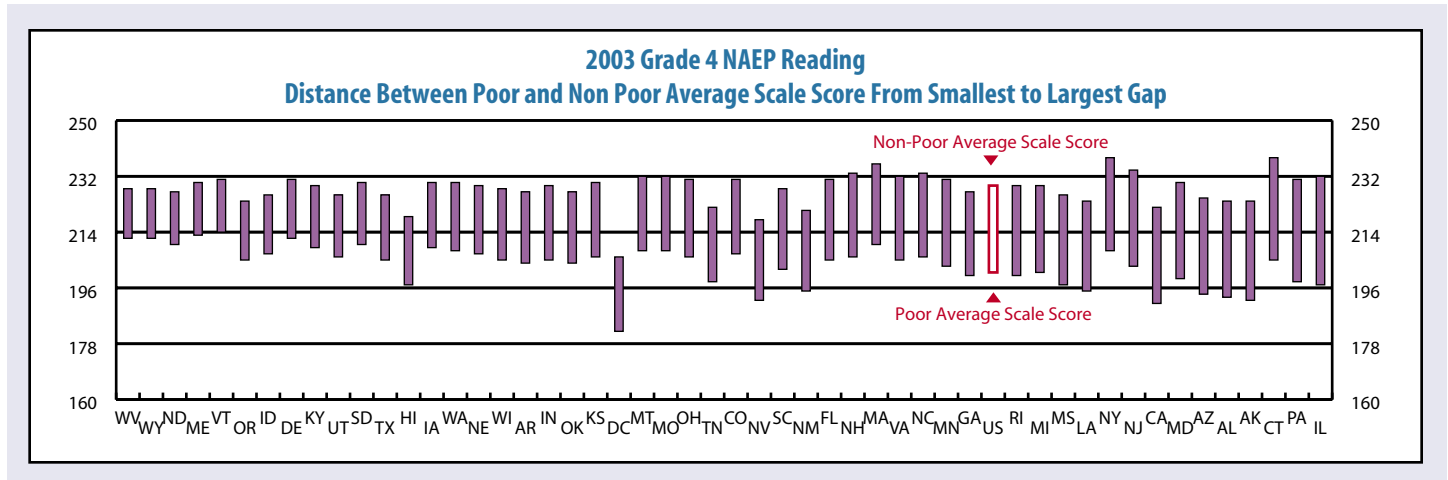


QUESTIONS to think about: How does the performance of this group of students in your state compare across states? How does the gap size compare across states?

NAEP Grade 4 Reading

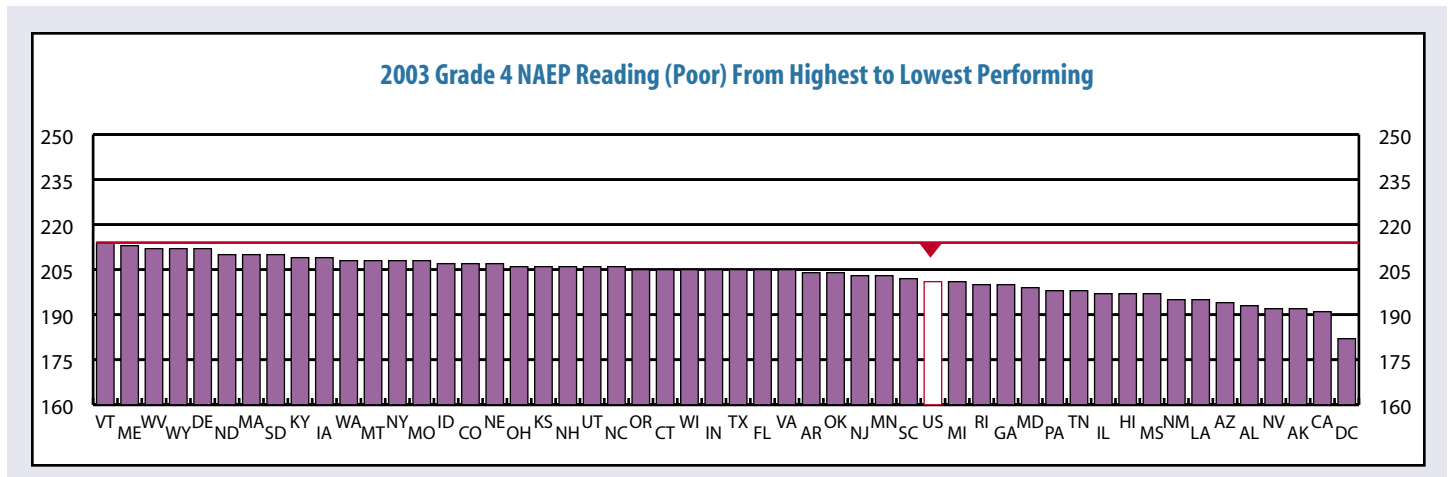
How does the Poor-Non-Poor achievement gap compare across states?

The chart below shows the reading achievement gap between poor and nonpoor fourth-graders on NAEP. The top of each bar represents the average scale score for nonpoor students and the bottom is that for poor students.



How do Poor Students' scores compare across states?

Some states are far more successful teaching minority and low-income students than others. Indeed, the achievement gap between students of the same group in high- and low-performing states is often larger than the gap between white and minority or poor and nonpoor students within a state. The following chart shows the average scale scores of poor fourth-graders across states.



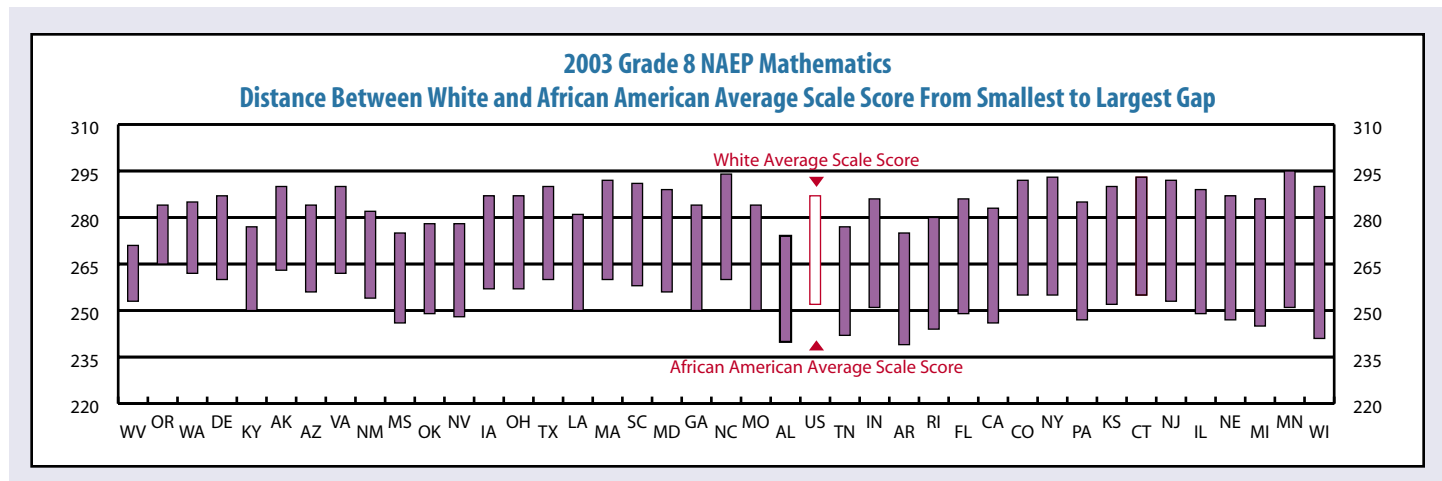
QUESTIONS to think about: How does the performance of this group of students in your state compare across states? How does the gap size compare across states?

For this report, we chose to feature the progress of African American, Latino and low-income students. A complete picture of how your state and the country is doing with all groups of students can be found on Ed Watch Online at www.edtrust.org.

NAEP Grade 8 Mathematics

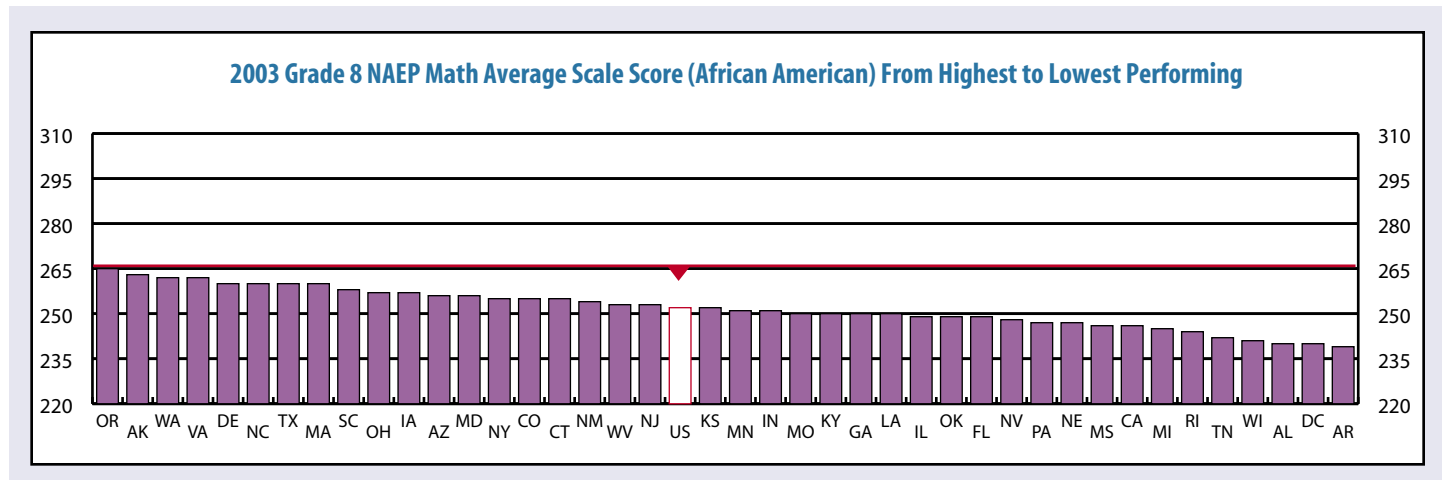
How does the African American-White achievement gap compare across states?

The chart below shows the mathematics achievement gap between African American and white eighth-graders on NAEP. The top of each bar represents the average scale score for white students and the bottom is that for African American students.



How do African American scores compare across states?

Some states are far more successful teaching minority and low-income students than others. Indeed, the achievement gap between students of the same group in high- and low-performing states is often larger than the gap between white and minority or poor and nonpoor students within a state. The following chart shows the average scale scores of African American eighth-graders across states.

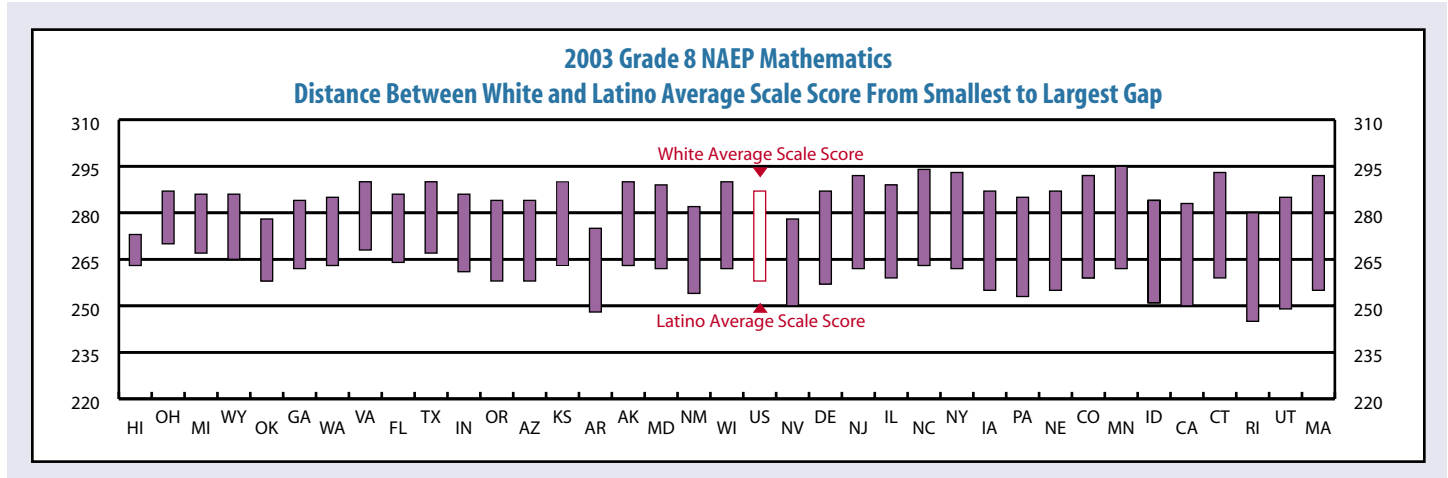


QUESTIONS to think about: How does the performance of this group of students in your state compare across states? How does the gap size compare across states?

NAEP Grade 8 Mathematics

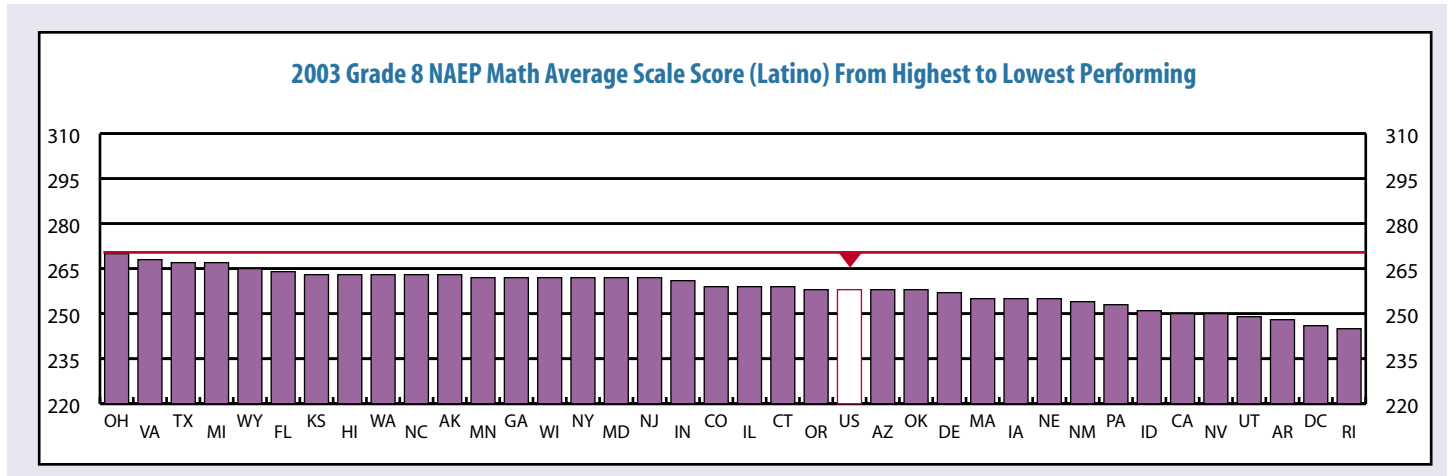
How does the Latino-White achievement gap compare across states?

The chart below shows the mathematics achievement gap between Latino and white eighth-graders on NAEP. The top of each bar represents the average scale score for white students and the bottom is that for Latino students.



How do Latino scores compare across states?

Some states are far more successful teaching minority and low-income students than others. Indeed, the achievement gap between students of the same group in high- and low-performing states is often larger than the gap between white and minority or poor and nonpoor students within a state. The following chart shows the average scale scores of Latino eighth-graders across states.

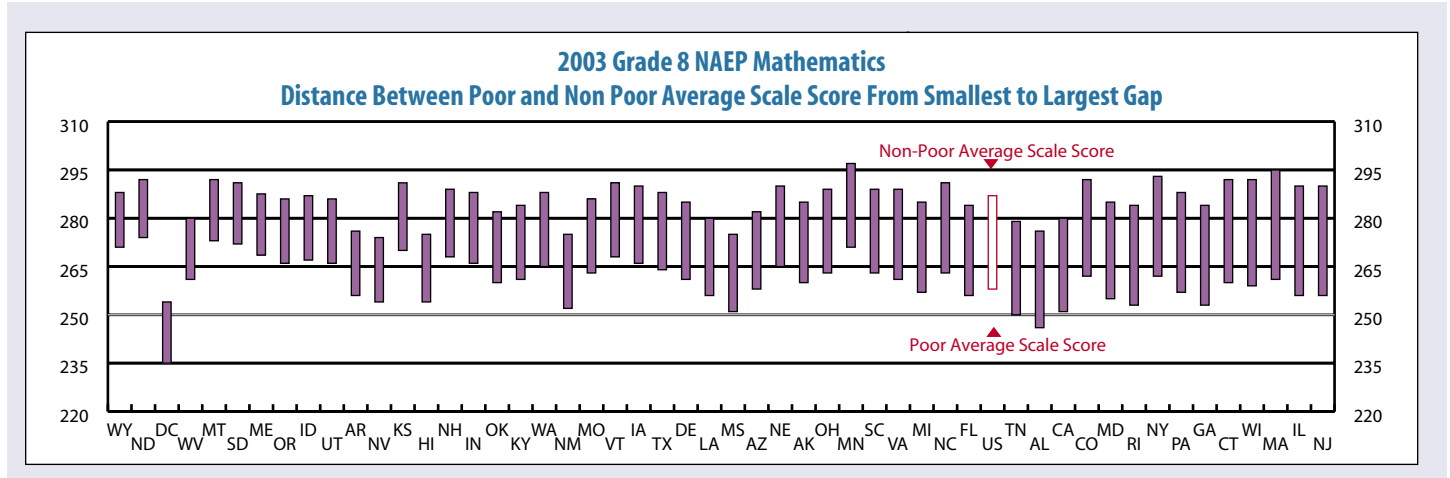


QUESTIONS to think about: How does the performance of this group of students in your state compare across states? How does the gap size compare across states?

NAEP Grade 8 Mathematics

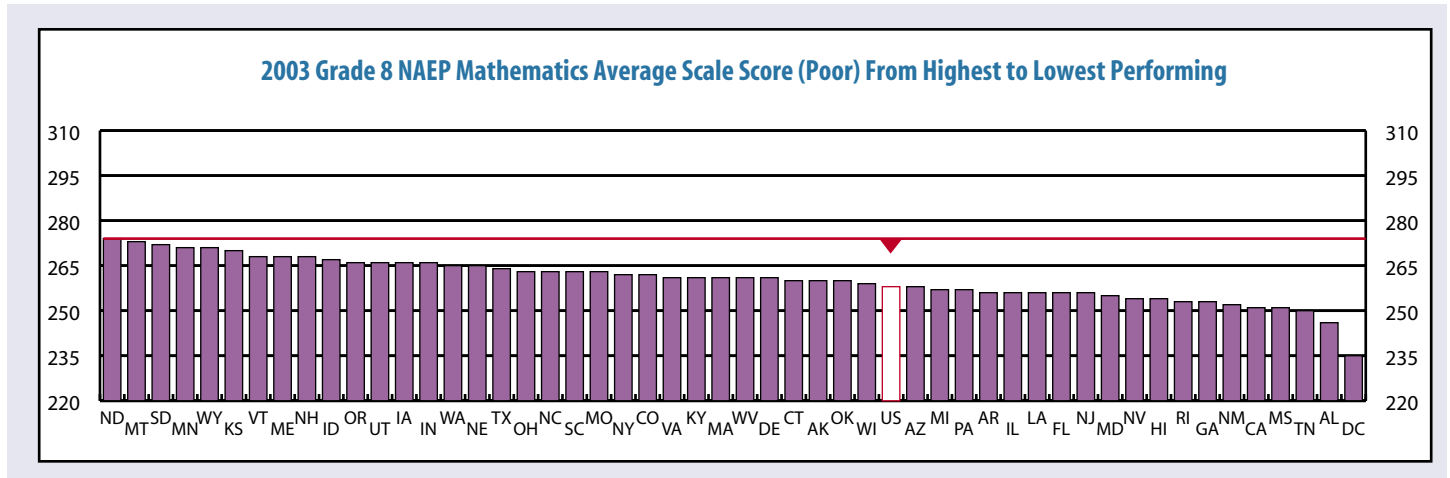
How does the Poor-Non-Poor achievement gap compare across states?

The chart below shows the mathematics achievement gap between poor and nonpoor eighth-graders on NAEP. The top of each bar represents the average scale score for nonpoor students and the bottom is that for poor students.



How do Poor Students' scores compare across states?

Some states are far more successful teaching minority and low-income students than others. Indeed, the achievement gap between students of the same group in high- and low-performing states is often larger than the gap between white and minority or poor and nonpoor students within a state. The following chart shows the average scale scores of poor eighth-graders across states.



QUESTIONS to think about: How does the performance of this group of students in your state compare across states? How does the gap size compare across states?

In earlier times, young people with weak reading and math skills could still find good jobs if they were willing to work hard. Now a high school diploma is the bare minimum for young people. Most will also want at least some postsecondary education or training in order to succeed in today's marketplace.

Student demographics, 2001-2002

Population and enrollments: These data offer a picture of the student population in the nation. Comparing the demographic distribution of students across each educational level shows what happens to children as they journey through the education system. Significant differences should raise questions about equity.

	Population, age 5-24	Public K-12	Two Year Colleges	Four Year Colleges
African-American	14%	17%	13%	11%
Asian	4%	4%	6%	5%
Latino	15%	17%	14%	6%
Native American	1%	1%	1%	1%
White	57%	60%	59%	64%
Other	10%	NA	7%	12%
Total	100%	100%	100%	100%
Number	87,671,193	47,440,514	10,331,071	12,236,181

Participation and Success in Advanced Placement, 2003

Composition of AP test takers: Students take Advanced Placement (AP) exams after completing year-long AP courses, typically among the highest level offered in high schools. In a system where all students have equal access to these opportunities, the percentage of test takers by race and ethnicity would be proportional to their representation in public K-12 enrollment.

Who Takes AP Tests?

Example: Of all AP test takers, this proportion were African Americans.

	Public K-12 Enrollment	Calculus AB	English Language and Composition	Biology
African American	17%	5%	6%	6%
Asian	4%	16%	11%	19%
Latino	17%	8%	12%	8%
Native American	1%	0%	1%	0%
White	60%	72%	69%	67%
Total	100%	100%	100%	100%
Number	47,440,514	129,115	142,500	78,714

Success rates of AP test takers: While AP test taking offers a picture of access to AP coursework, relative achievement on these exams is an important measure of student/teacher preparedness. Huge variability in the proportion of test takers that earn a 3 or greater should raise questions about the quality of instruction or educational resources provided in courses labeled Advanced Placement.

Who Scores a 3, 4 or 5?

	Calculus AB	English Language and Composition	Biology
African American	34%	29%	26%
Asian	69%	61%	63%
Latino	42%	31%	31%
Native American	46%	42%	38%
White	69%	66%	61%
Total	65%	58%	57%

*Data is not reported where there were less than 25 test takers in the state.

Example: Of all African Americans who took the AP Calculus exam, this percent scored a 3, 4 or 5.

Who makes it through high school?

African American	51%
Asian	79%
Latino	52%
Native American	54%
White	72%
Total	70%

High School Graduation Rates, 2001

The high school diploma represents a basic certification of knowledge and skills. This table shows what percentage of students who entered the ninth grade in 1997 graduated with a standard diploma four years later.

Who makes it through college?

For young people today, good jobs increasingly require at least some postsecondary training with the greatest advantage going to those with a B.A. or better. In the last decade, college-going rates skyrocketed. Below we offer several indicators of post-secondary trends in the nation compared to the performance of the top states on each indicator.

Participation and Persistence in Postsecondary

	The Nation	Top States*
H.S. freshmen enrolling in any U.S. college w/in 4 years	38%	52%
1st year Community College students returning their 2nd year	55%	61%
Freshmen at 4 year returning their sophomore year	74%	84%
First-time full-time freshmen completing a BA w/in 6 years	54%	64%

*Top States= median of top 5 performing states

In order to determine equity in attainment rates, we have compared freshmen enrollments to bachelor's degrees awarded four years later. These indicators should paint a fairly representative picture of who makes it through college.

Freshmen* vs. Degrees Awarded Nationally

*first-time, full-time and part-time freshmen

freshmen – 1998-1999, degrees - 2002

	Freshmen	Bachelor's
African American	263,166	105,494
Asian	117,113	74,805
Latino	207,686	75,561
White	1,456,713	859,766
Other	168,789	103,620
Total	2,213,467	1,219,246

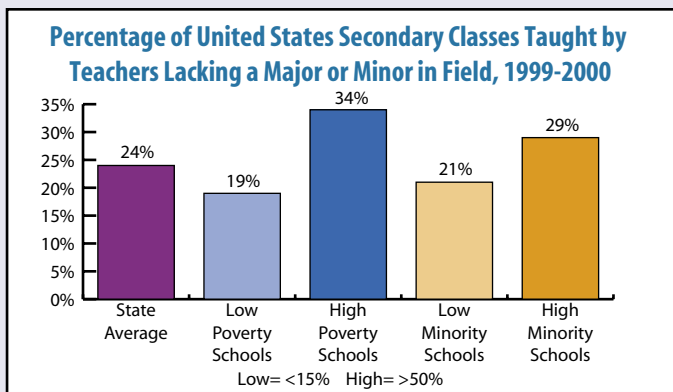
Differences in achievement and attainment between groups of students are often rooted in differences in the availability of educational resources. To begin to understand achievement gaps between groups of students, states and districts should look at the distribution of qualified teachers, challenging curriculums, and funds.

Qualified Teachers

Who teaches whom?

Research is very clear: good teachers make good schools. Students who get several effective teachers in a row will soar no matter what their family backgrounds, while students who have even two ineffective teachers in a row rarely recover.

Under the No Child Left Behind Act (NCLB), every state and school district must make sure that low-income students have their fair share of qualified and experienced teachers. Readers should investigate their state's plan for doing this.



This chart shows one measure of the distribution of teacher talent across the country. According to national survey data, about 1 in 4 of all secondary classrooms are taught by teachers lacking either a major or minor in the subject area. Classrooms in high-poverty schools and high-minority schools are far more likely than those in low-poverty or low-minority schools to be taught by teachers out of their field of expertise.

Challenging Curriculum

Employers have joined higher education in the demand for individuals with high-level knowledge and skills. All students need a rigorous curriculum in order to be prepared for success whether they choose college or work after high school. Yet too few students have the opportunity to gain these skills through rigorous math and science courses.

High Level Course-Taking, 2002

Course-taking is an indicator of the amount of access students have to challenging subject matter. States should examine differences in access for different student groups.

	The Nation	Top States*
8th graders taking Algebra	22%	35%
9th-12th graders taking at least 1 upper-level math course	48%	59%
9th-12th graders taking at least 1 upper-level science course	31%	41%

*Top States= median of top 5 performing states

Special student placements, 2000

School programs vary a great deal in their level of curriculum and instruction. If there is equity in placements, the number of Latino students, for example, placed in gifted and talented programs should be proportional to Latinos enrolled in K-12. Although suspensions are not precisely an academic program, we include data about them because too often they represent a placement out of the system altogether.

Example for reading this chart: Of all public K-12 enrollments in the nation, this proportion were African Americans.

	% Public K-12 Enrollment	% Gifted And Talented	% Special Education	% Suspensions
African American	17%	8%	22%	34%
Asian	4%	7%	2%	2%
Latino	16%	10%	15%	15%
Native American	1%	1%	1%	1%
White	61%	74%	60%	48%
Total	100%	100%	100%	100%
Number	47,018,606	2,926,034	3,908,226	3,053,449

Investments

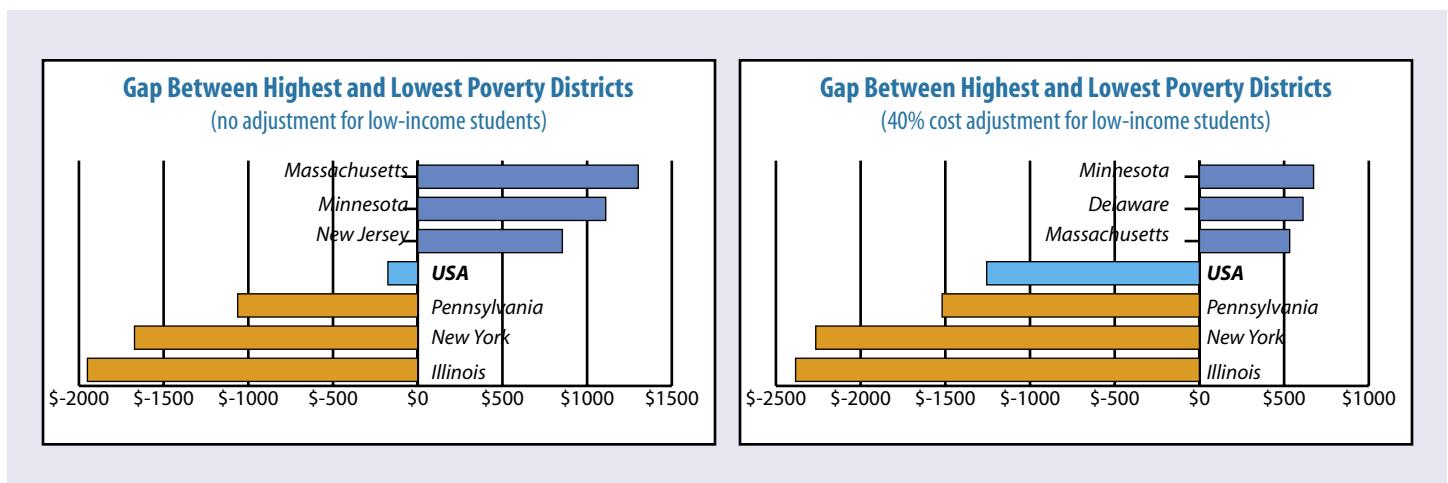
Funding Gaps: Education Dollars by District Poverty Enrollment, 2001

Many states spend considerably fewer state and local resources on the education of poor children than they do on other children. The chart on the left shows the absolute dollar difference between per-student funding in high- and low-poverty districts in the country. Some states, like Illinois, have gaps of \$1500 per student or more. Other states, like Massachusetts, actually provide more resources to high-poverty districts.

The chart on the right also compares high- and low-poverty districts, but includes the additional 40% adjustment for low-income students that federal law uses to determine whether states have “leveled the playing field” in high-poverty schools. This measure is a more accurate comparison of the relative capacity of different districts to effectively serve their students.

The nation has an effective funding gap of:

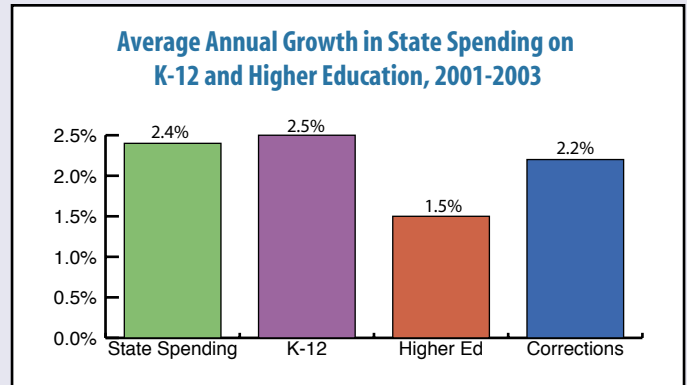
- \$1,256 per student;
- \$31,400 for a typical classroom of 25 students; and,
- \$502,392 for a typical elementary school of 400 students.



All funding gap figures are adjusted for local cost of living and cost of serving students with disabilities.

State Funding for K-12 and Higher Education

Most states have struggled with budget shortfalls in recent years. By examining the percentage change in total state spending on K-12 and higher education from state fiscal year 2001 to 2003, and comparing those changes to other budget areas, a national picture emerges of state priorities in times of fiscal stress.



College Affordability Gaps, 2002

College costs often discourage students with limited means from seeking further education. States can lessen this problem by targeting their aid dollars to low-income students and by providing affordable colleges within the reach of low-income families.

	The Nation	Top States*
Amount state provides to low-income students for every \$1 of federal Pell grants	\$0.38	\$0.94
Share of income that poorest families need to pay for tuition at lowest priced colleges	N/A	8%

*Top States= median of top 5 performing states (Measuring Up 2002)

Education Watch Interactive State and National Data Site

Much of the data in this report and many additional education indicators are available on EdWatch Online—our interactive State and National Data Site, which allows users to compare student achievement and opportunity data across states and the nation. To access the site, visit our website at www.edtrust.org.

Dispelling the Myth Online

While these reports focus on state-level data, Dispelling the Myth Online—another of our online data tools—allows users to mine school-level achievement data in almost every state. This easy-to-use, fully interactive website allows you to use school demographic and performance criteria, of your choice, to conduct rapid searches for high-performing or high-improving schools in nearly every state in the nation for all subjects and grade-levels where state assessment data is available.

To access the full collection of Dispelling the Myth analyses, tools, and documentation, go to our website at www.edtrust.org.



The Education Trust was created to promote high academic achievement for all students at all levels, kindergarten through college. While we know that all institutions could better serve their students, our work focuses on the schools and colleges most often left behind in efforts to improve education: those serving Latino, African American, Native American and low-income students.

References

Achievement

- National Assessment of Education Progress (NAEP)
 - National Center for Education Statistics, NAEP web tool, 2004. <http://nces.ed.gov/nationsreportcard/>
- Notes:
- NAEP data are not reported for race/ethnic groups where the sample size is too small for a reliable estimate.
 - NAEP scale score changes on pages 2 & 3 may not be statistically significant.
 - NAEP cross-state tables on pages 4 & 5 are presented for either African American or Latino students, whichever group represents a greater proportion of 2001-02 public K-12 enrollment. Where neither African American nor Latino students comprise at least 3% of the public K-12 enrollment in a state, data for low-income students, as defined by eligibility for the federal free- and reduced-price lunch program, is presented.
 - On NAEP cross-state tables, states that share the same gap size or minority scale score are ordered alphabetically. The nation is not included in cross-state rank order.
- State Assessments
 - Data collected from state department of education websites.

Attainment

- Population, Age 5-25
 - U.S. Census, American Fact Finder, 2000. <http://www.census.gov>
 - Public K-12 Enrollment
 - National Center for Education Statistics, Statistical Analysis Report: Public School, Student, Staff, and Graduate Counts by State: 2001-02, May 2003. http://nces.ed.gov/pubs2003/snf_report03/table_04.asp
 - Two Year College Enrollment
 - Four Year College Enrollment
 - U.S. Department of Education, Integrated Post-Secondary Education Data System.
- Note: Unlike the population age 5-24, two year college, and four year college data, the public K-12 enrollment data does not have an "other" category. Therefore, caution should be taken when making direct comparisons across the four categories.
- Participation and Success in Advanced Placement
 - The College Board, AP Summary Reports, 2003. http://collegeboard.com/student/testing/ap/exgrd_sum/2003.html
- Note: AP data does not include non-respondents. In states in which Native Americans represent more than 5% of the general population, Native Americans were included in the total test takers and public K-12 enrollment.
- High School Graduation Rates
 - Jay Greene and Greg Forster. *Public High School Graduation and College Readiness Rates in the United States*. The Manhattan Institute for Policy Research, September 2003.

Note: Graduation rates are calculated from a cohort analysis of enrollment data and diploma counts from the U.S. Department of Education's Common Core of Data. The number of first-time 9th graders in 1997 is compared to the number of students who received a regular diploma four years later. GED recipients are not counted. The calculations account for state population changes, as well as for the tendency of 9th grade students to be held back more than students in other grades.

- High School Freshmen Enrolling in Any U.S. College Within 4 Years
 - Tom Mortenson, "Chance for College by Age 19 by State in 2000." Postsecondary Education Opportunity. No. 123, September 2002. <http://www.postsecondary.org>
- 1st Year Community College Students Returning their 2nd Year
- Freshmen at 4 Year Returning their Sophomore Year
- First-time Full-Time Freshmen Completing a B.A. Within 6 Years
 - National Information Center for Higher Education Policymaking and Analysis, 2002 data from ACT, "Institutional Data Questionnaire," unpublished analysis by ACT, Iowa City, Iowa. <http://www.higheredinfo.org>

Note: "Top states" defined as the median value of the five highest-performing states on each indicator.

- 6-Year Graduation Rates at Largest State University
 - U.S. Department of Education, Integrated Post-Secondary Education Data System, Graduation Rate Survey.

Note: Percentages represent the proportion of students who enrolled as first-time, full-time, degree-seeking freshmen in the Fall of 1996, and received a bachelor's degree from that institution on or before spring 2002.

- Freshmen vs. Degrees Awarded
 - U.S. Department of Education, Integrated Post-Secondary Education Data System.

Opportunity

- Who Teaches Whom?
 - National Center for Education Statistics, 1999-2000 Schools and Staffing Survey.
 - Calculations by Richard Ingersoll, University of Georgia, published by the Education Trust, *All Talk No Action*, August 2002.

Note: Teacher distribution data refers to secondary classes in the core subjects.

- High-Level Course-Taking
 - Council of Chief State School Officers, unpublished
- Public K-12 Enrollment
 - National Center for Education Statistics, Overview of Elementary and Secondary Schools and Districts: School Year 2000-01, April 2002.

Note: Public K-12 enrollment data on the Special Student Placements table reflects the 2000-01 school year to provide the most accurate context for the gifted and talented, special education, and suspensions data. Public K-12 enrollment data elsewhere in the report reflects the 2001-02 school year.

- Gifted and Talented, Special Education and Suspensions
 - U.S. Department of Education, Office for Civil Rights, 2000 Elementary and Secondary School Civil Rights Compliance Report, 2003. Calculations by the Education Trust.

Note: The total number of students in special education include those students classified as having mental retardation, serious emotional disturbance, and specific learning disabilities.

- Investments
 - Education Trust analysis of district-level state and local revenue data for the 2000-01 school year collected by the National Center for Education Statistics and the U.S. Census Bureau. For a detailed explanation of the methodology used to calculate state funding gaps, see *The Funding Gap*, and accompanying *Technical Appendix*, The Education Trust, 2003.
- State Funding for K-12 and Higher Education
 - National Association of State Budget Officers, 2002 State Expenditure Report.
- Amount State Provides to Low-Income Students for Every \$1 of Federal Pell Grants
 - U.S. Department of Education, Office of Postsecondary Education, Title IV/ Pell End of the Year Report, 2001-02.
 - National Association of State Student Grant and Aid. Analysis by the Education Trust.
- Share of Income that Poorest Families Need to Pay for Tuition at Lowest Priced Colleges
 - The National Center for Public Policy and Higher Education, *Measuring Up 2002: The State-by-State Report Card for Higher Education*, 2002. <http://measuringup.highereducation.org/2002/reporhome.htm>

Note: "Top states" defined as the median value of the five highest-performing states on each indicator.