

A PRIMER ON THE U.S. PUBLIC EDUCATION SYSTEM:

What A Donor Needs to Know About the Biggest Challenges and Biggest Opportunities



IMPROVING PUBLIC EDUCATION: *A Guide for Donors to Make a Difference*

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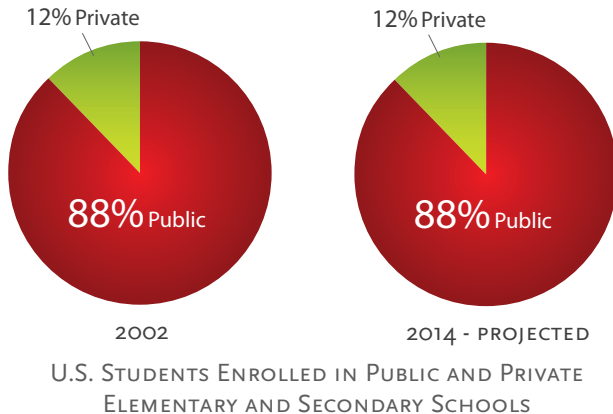
A PRIMER ON THE U.S. PUBLIC EDUCATION SYSTEM:

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INTRODUCTION

The majority of U.S. students attend public rather than private schools – and this situation isn’t expected to change over the next decade. Recognizing the reality that nearly all students will get their education in the public school system, this primer provides information about the characteristics, accomplishments and challenges of public education in the United States. We hope it helps you consider where and how best to focus your giving in education, so you can find the problems and solutions that interest you and achieve the impact you want.

As much as possible, the data we’ve compiled here come from the federal government. Primarily we’ve used the National Center for Education Statistics (NCES), which is the chief agency in the U.S. Department of Education charged with gathering education data; it is widely considered the most objective and comprehensive source of information about America’s public schools. Data are the most recent available, often the 2002-03 school year or earlier due to the time involved in compiling the data. In cases where NCES data are not available or incomplete, we’ve carefully chosen data from other reliable sources. *Unless otherwise noted, all data is for public school students.*



National Center for Education Statistics, *Digest of Education Statistics* 2005, table 3.

The Center on Education Policy helped identify and assemble much of the data cited in the primer. We especially acknowledge the hard work and advice of the Center’s Jack Jennings, Nancy Kober and Diane Stark Renter. Based in Washington, DC, the Center is a national, independent advocate for public education and for more effective public schools. It works to help citizens make sense of the conflicting opinions and perceptions about public education and create the conditions that will lead to better public schools. www.cep-dc.org

The primer is divided into sections that answer these five questions:

- 1. What are the characteristics of public school students?**
- 2. How well are public school students achieving?**
- 3. Who makes the decisions in the public education system?**
- 4. How are public schools funded?**
- 5. What is the public school teaching force like?**

In addition, two final sections are designed to help you think about how you might use all these data to inform your giving in education:

What research says about the factors that create differences in student achievement.

Seven opportunities where donors can make a contribution or impact.

We encourage you – armed with the observations and data in this primer as a starting point – to investigate the answers in your own community to these five questions above. Remember this primer is intended as an overall snapshot of the nation’s public schools today. As such, it relies on national averages across all schools. The experiences, trends and issues in your local community may not perfectly match the national snapshot presented here.

Also remember that philanthropic giving in the U.S. to public schools constitutes a small fraction of the total amount of public money spent. One recent estimate places all grantmaking to support K-12 public education at under \$2 billion – while the total expenditure from all local, state and federal sources is \$500 billion.

Rather than despair at this comparison and conclude that your education grantmaking won’t make any difference, we instead hope you’ll consider carefully where the greatest problems are and where the greatest opportunities are for private money to make a difference.

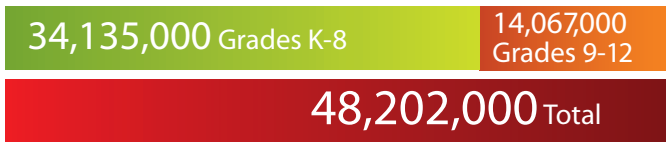
Grants of any size, when wisely made, can make a big impact in the public education system. Use this primer to begin to think carefully about where you might achieve the greatest leverage and help the most students to benefit from your philanthropy.

1

What are the Characteristics of Public School Students?

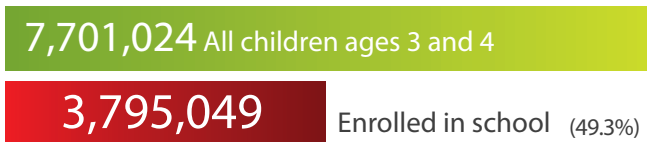
The public school system enrolls nearly 50 million students.

School enrollment has been setting new records since the mid 1990s and is projected to continue growing until 2014 (the last year for which the federal government has projected school enrollment).



ENROLLMENT IN PUBLIC ELEMENTARY AND SECONDARY SCHOOLS (2002)¹

Before enrolling in the public education system, a large number of students also participate in preschool.



CHILDREN AGED 3 AND 4 WHO ARE ENROLLED IN SCHOOL (2000)²

¹ NCES, *Digest of Education Statistics 2004*, table 3.

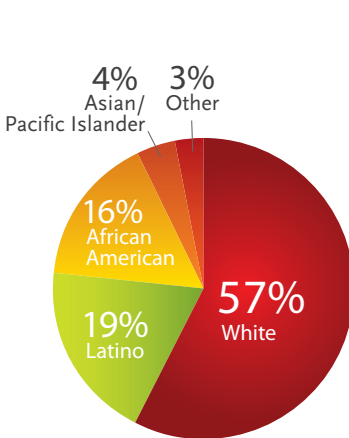
² U.S. Census Bureau, 2000 Census, *Summary File 3*, table PCT23. The Census Bureau counts three- and four-year-old children enrolled in programs where instruction is an important element, including nursery school, federal Head Start programs, preschool and kindergarten; private homes in which custodial care is provided are not included.

More than one-third of students are from low-income families.

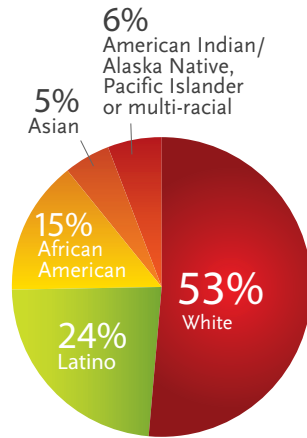
Students' eligibility for free or reduced-price school lunches is an indicator commonly used by schools to determine the number of children from low-income families. Children qualify for free lunches under the National School Lunch Act if their family income does not exceed 130% of the federal poverty level and for reduced-price lunches if their family income is above 130% but below 185% of the poverty level.

36% Students eligible for free or reduced-price school lunches (2003-04)³

Four out of 10 students are children of color – and this number is projected to grow to half of all school-age students by 2020.



DISTRIBUTION OF STUDENTS AGES 5-17 BY RACE/ETHNICITY (2003)⁴



DISTRIBUTION OF STUDENTS AGES 5-17 BY RACE/ETHNICITY (2020 – PROJECTED)⁵

³ NCES, *Public Elementary and Secondary Students, Staff, Schools, and School Districts: School Year 2003-04*, table 3.

⁴ NCES, *Condition of Education Statistics 2006*, table 5-1. Percentages do not total 100% because of rounding.

⁵ Federal Interagency Forum on Child and Family Statistics, *America's Children: Key National Indicators of Well-Being 2005* (<http://childstats.gov/americaschildren>), table POP3. Percentages do not total 100% because of rounding.

Black and Latino students are more likely than white students to attend schools with high concentrations of poor students and children of color.

DISTRIBUTION OF 4TH GRADERS – BY RACE/ETHNICITY AND POVERTY CONCENTRATION IN THEIR SCHOOL (2003)⁶

	All Students	Black	Latino	White
Less than 10% of students eligible for free/reduced lunch	21%	6%	6%	29%
More than 75% of students eligible for free/reduced lunch	21%	47%	51%	5%

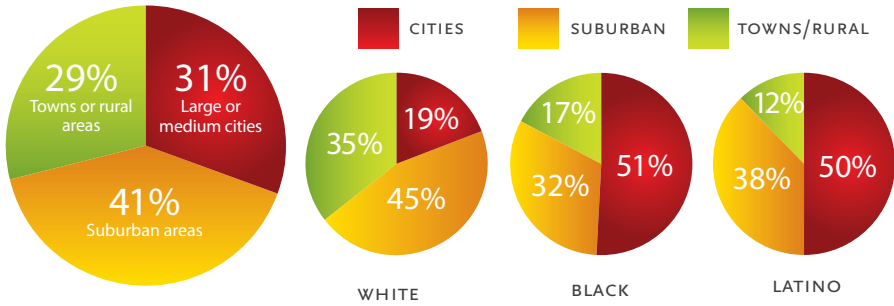
DISTRIBUTION OF STUDENTS – BY RACE/ETHNICITY AND CONCENTRATION OF MINORITY STUDENTS IN THEIR SCHOOL (2002)⁷

	All Students	Black	Latino	White
Less than 10% minority enrollment	24%	2%	2%	39%
More than 75% or more minority	23%	52%	57%	3%

⁶ NCES, *The Condition of Education 2004*, indicator 5. The poverty concentration in this table is based on the percentage of students eligible for free or reduced-price school lunches.

⁷ NCES, *Digest of Education Statistics 2005*, table 94.

While most students attend public school in suburbs, towns or rural areas, more black and Latino students attend school in urban areas.

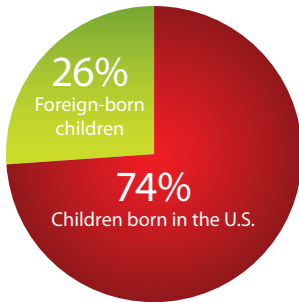


DISTRIBUTION OF STUDENTS – BY TYPE OF COMMUNITY (2003)⁸

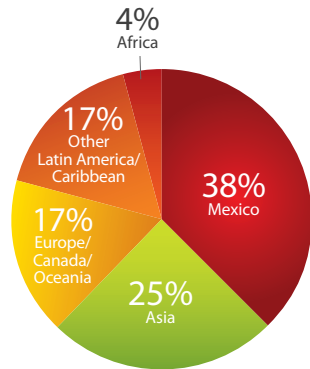
About one school-age child in five is a child of immigrants.

Most of these children themselves were born in the U.S. rather than overseas. Of children born outside the U.S., the majority are from Mexico and Asian countries.

19% School-age children whose parents are legal or undocumented immigrants (2000)



BIRTH STATUS OF SCHOOL-AGE CHILDREN OF IMMIGRANT PARENTS (2000)⁹



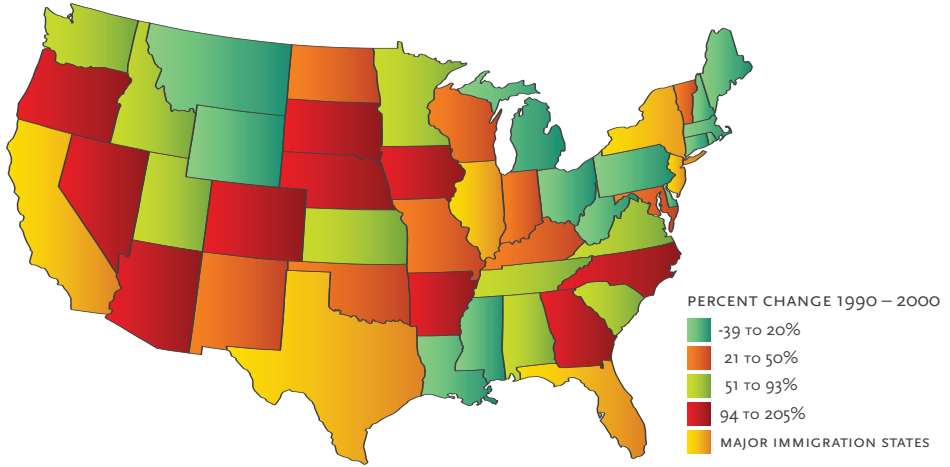
COUNTRY OR REGION OF BIRTH FOR FOREIGN-BORN CHILDREN IN PRESCHOOL-GRADE 5 (2000)⁹

⁸ NCES, Navigating resources for rural schools, table 1 (http://nces.ed.gov/surveys/RuralEd/TablesHTML/1_raceethnic_enroll.asp); and NCES, *Status and Trends in the Education of American Indians and Alaska Natives*, 2005, table A-2.1b. Percentages may not total 100% because of rounding.

⁹ R. Capps et al, *The New Demography of America's Schools: Immigration and the No Child Left Behind Act* (The Urban Institute, 2005), table 1, figure 3 and figure 4. Percentages may not total 100% because of rounding.

While the states with the largest overall populations – which have been traditional “gateway” states – still have the largest numbers of children in immigrant families, the fastest growth among immigrant children is in the Southwest, Midwest and inner West.

Nevada, North Carolina, Georgia and Nebraska have seen the greatest growth.

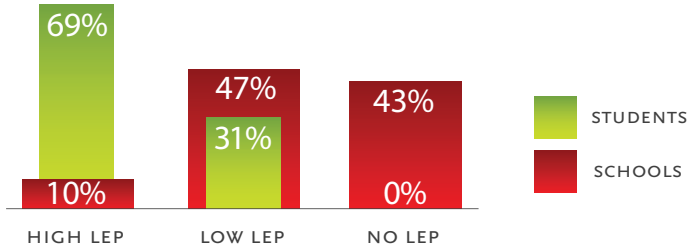


INCREASES IN CHILDREN OF IMMIGRANTS
IN PRESCHOOL-GRADE 5 BY STATE (1990-2000)¹⁰

¹⁰ R. Capps et al, *The New Demography of America's Schools: Immigration and the No Child Left Behind Act* (The Urban Institute, 2005), figure 10.

Students with limited-English proficiency are the most rapidly growing population in U.S. schools – increasing by over 50% (from 2.8 to more than 4 million) between 1993 and 2003.

In particular, elementary school students with limited-English proficiency are largely concentrated in a small number of schools, predominantly located in urban areas.



CONCENTRATION OF LIMITED-ENGLISH PROFICIENT (LEP) STUDENTS IN ELEMENTARY SCHOOLS (1999-2000)¹¹

Almost 14% of students receive special education services because they have a disability.

Three-fourths of these students are educated in regular classrooms with other children for a significant part of the school day (2003-04).¹²

50% Students with disabilities who spend 80% or more of the school day in regular classrooms

28% Students with disabilities who spend between 40% and 79% of the school day in regular classrooms

¹¹ Cosentino de Cohen et al, *Who's Left Behind? Immigrant Children in High and Low LEP Schools* (The Urban Institute, 2005), figure 1. In this figure, "High-LEP" schools are those where limited-English proficient students account for 23.5% or more of the student body; "Low-LEP" schools have less than 23.5% of their student body classified as limited-English proficient.

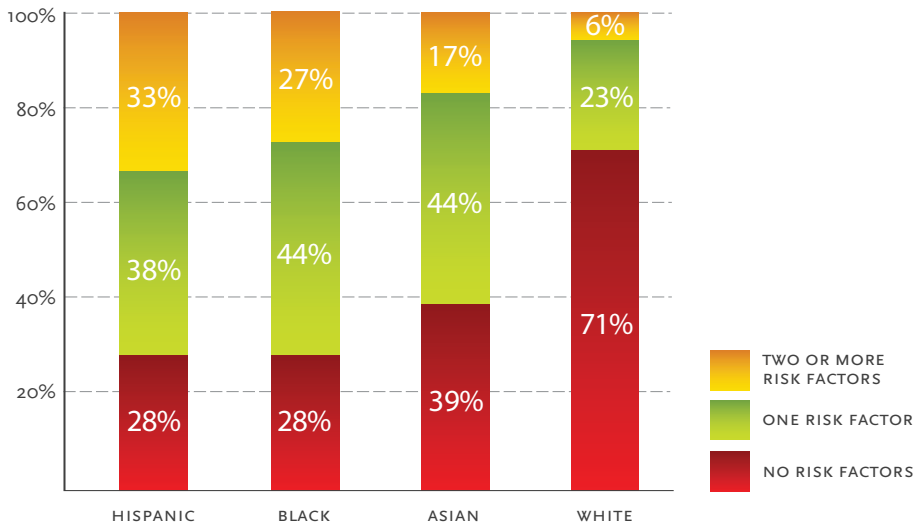
¹² NCES, *Condition of Education 2005*, table 27-1; and NCES, *Digest of Education Statistics 2005*, table 50.

2

How Well Are Public School Students Achieving?

Gaps in student achievement between different racial/ethnic and income groups begin showing up in kindergarten.

Nearly half of all entering kindergartners (46%) come from families with one or more risk factors for poor educational outcomes – and these children have early reading and mathematics skills that lag behind children with no risk factors.



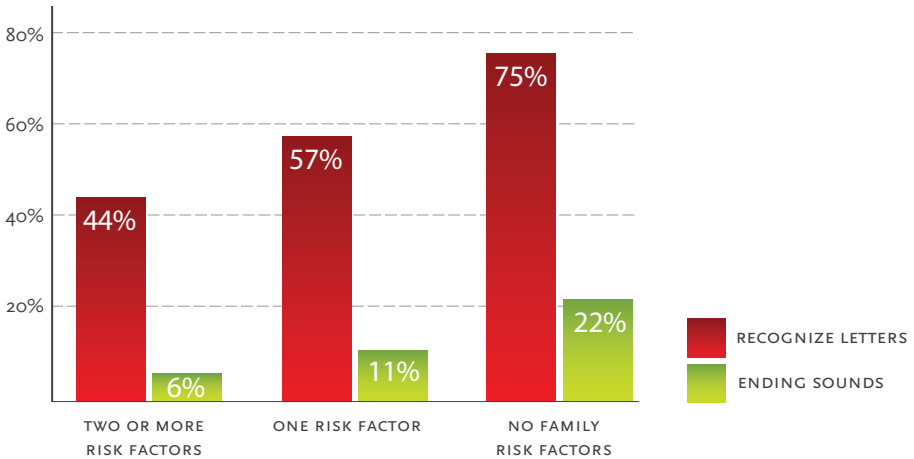
DISTRIBUTION OF KINDERGARTNERS – BY NUMBER OF FAMILY RISK FACTORS AND RACE/ETHNICITY (1998)¹³

Several family background characteristics are linked to poor educational outcomes for students, such as low achievement, repeating grades, suspension and dropping out. The four risk factors included in the tables above and below are:

- having a mother with less than a high school education;
- living in a family that receives food stamps or cash welfare payments;
- living in a single-parent household;
- having parents whose primary language is something other than English.

¹³ N. Zill and J. West, *Entering Kindergarten: American Children When They Begin School: Findings from The Condition of Education 2000*, (NCES, 2001), figure 9.

KINDERGARTNERS WITH SPECIFIC READING SKILLS –
BY NUMBER OF FAMILY RISK FACTORS (1998)¹⁴



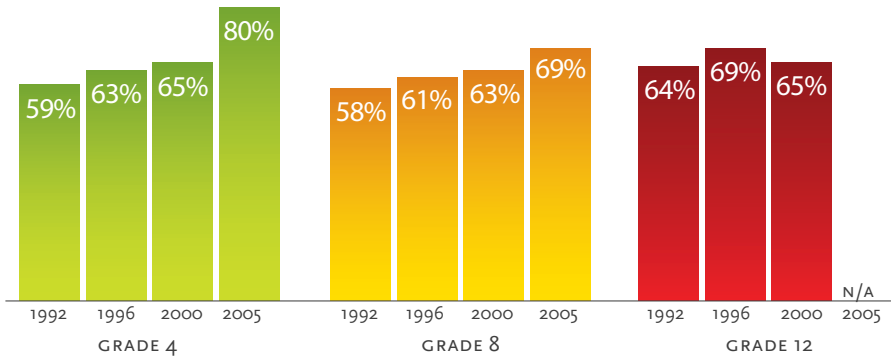
Since the early 1990s, student achievement in mathematics has gotten better, according to the National Assessment of Educational Progress (NAEP). Reading achievement has remained about the same.

The National Assessment of Educational Progress (NAEP), often called “the Nation’s Report Card”, is the only independent measure of what America’s students know and can do in reading, mathematics, science, writing and other core subject areas. Congress created NAEP in 1969 and it is administered by the U.S. Department of Education.

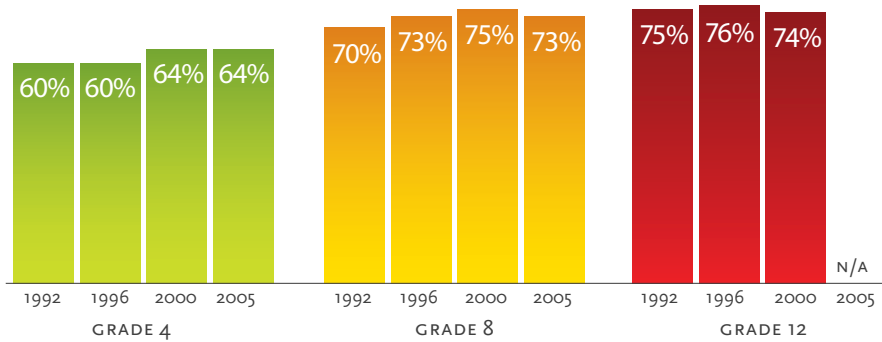
NAEP tests students in grades 4, 8 and 12 and reports on student performance in terms of three achievement levels: Basic, Proficient and Advanced. The NAEP achievement levels, which are higher than performance levels set by many states for their own tests, are meant to provide a consistent and stable standard for comparing achievement across states. Students performing at the Basic level show partial mastery of the prerequisite knowledge and skills that are fundamental for proficient work at each grade.

¹⁴ N. Zill and J. West, *Entering Kindergarten: American Children When They Begin School: Findings from The Condition of Education 2000*, (NCES, 2001), figure 12. Numbers based on children assessed in English; excludes 19% of Asian and 30% of Latino children. Percentages do not add to 100% because of rounding.

STUDENTS SCORING AT OR ABOVE THE “BASIC” LEVEL ON NAEP MATH¹⁵



STUDENTS SCORING AT OR ABOVE THE “BASIC” LEVEL ON NAEP READING¹⁵



In reading the NAEP achievement data, note two caveats:

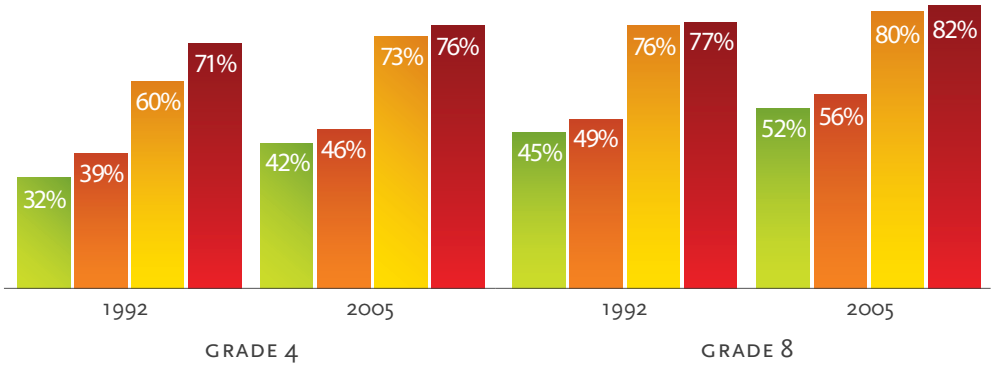
- Test accommodations were not permitted for students with disabilities and English language learners before 1996 in math and before 1998 in reading; and
- The government has not reported 12th grade results since 2000 in math and 2002 in reading. In recent years, fewer high schools have agreed to participate in NAEP; in addition, concerns have arisen about whether high school seniors are motivated to do their best on the NAEP tests.

¹⁵ National Assessment of Educational Progress, *Math 2005*, figure 1; *Mathematics Highlights 2000*; *Reading 2005*, figure 1; and *Reading Highlights 2002*.

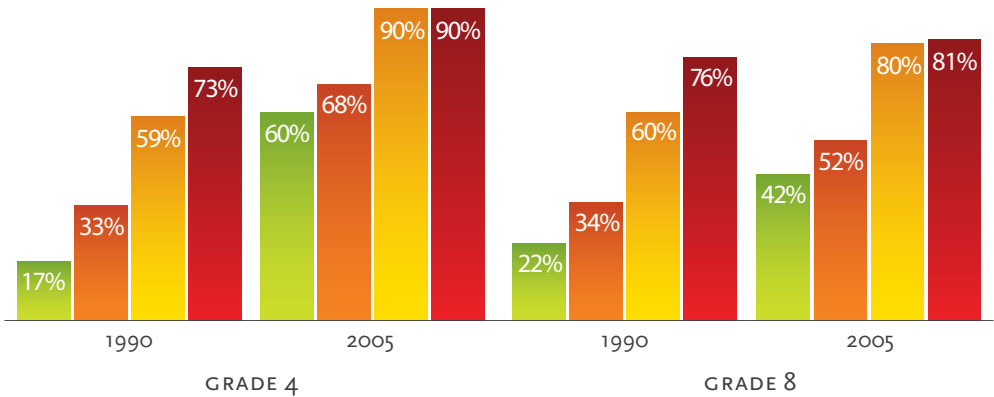
NAEP scores for black, Latino and low-income students have gone up significantly since the 1990s in grades 4 and 8. Nonetheless, wide gaps in test scores remain between racial/ethnic and income groups, in part because scores have gone up for all groups.



STUDENTS SCORING AT OR ABOVE THE “BASIC” LEVEL ON NAEP READING – BY RACE/ETHNICITY¹⁶



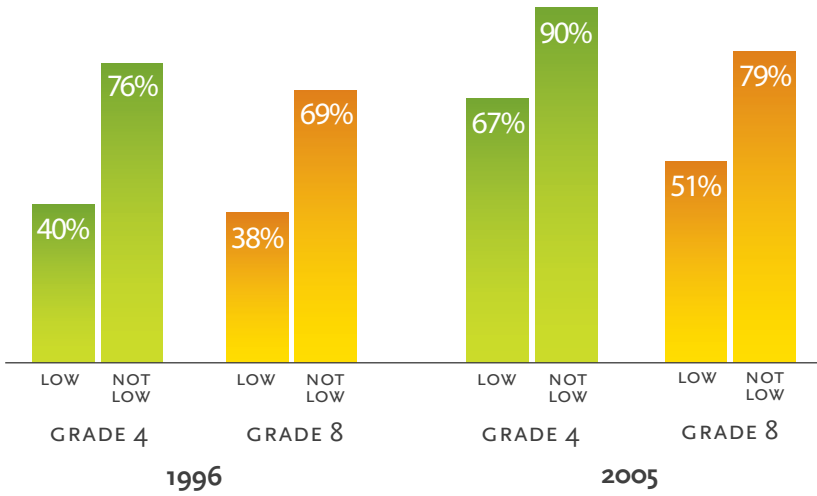
STUDENTS SCORING AT OR ABOVE THE “BASIC” LEVEL ON NAEP MATH – BY RACE/ETHNICITY¹⁷



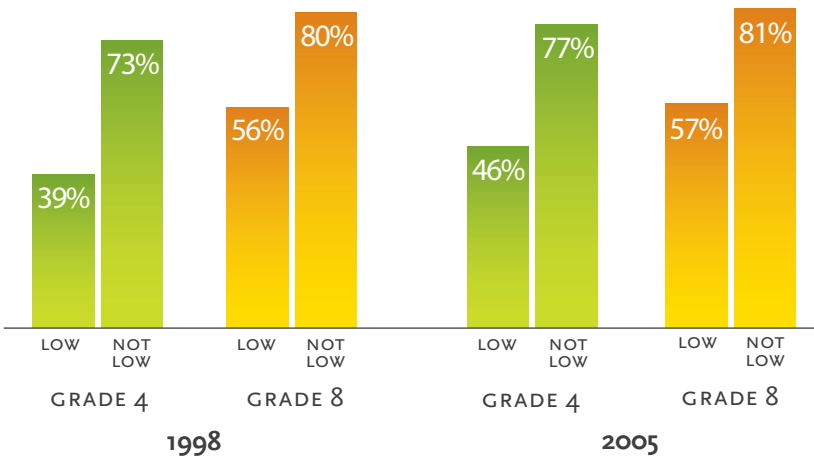
¹⁶ NAEP, *Reading 2005*, figures 2 and 3.

¹⁷ NAEP, *Math 2005*, figures 2 and 3. Scores for Asian students are for 1992, the first year in which math scores were broken out for this racial/ethnic group.

STUDENTS SCORING AT OR ABOVE THE “BASIC” LEVEL
ON NAEP MATH – BY INCOME¹⁸



STUDENTS SCORING AT OR ABOVE THE “BASIC” LEVEL
ON NAEP READING – BY INCOME¹⁸

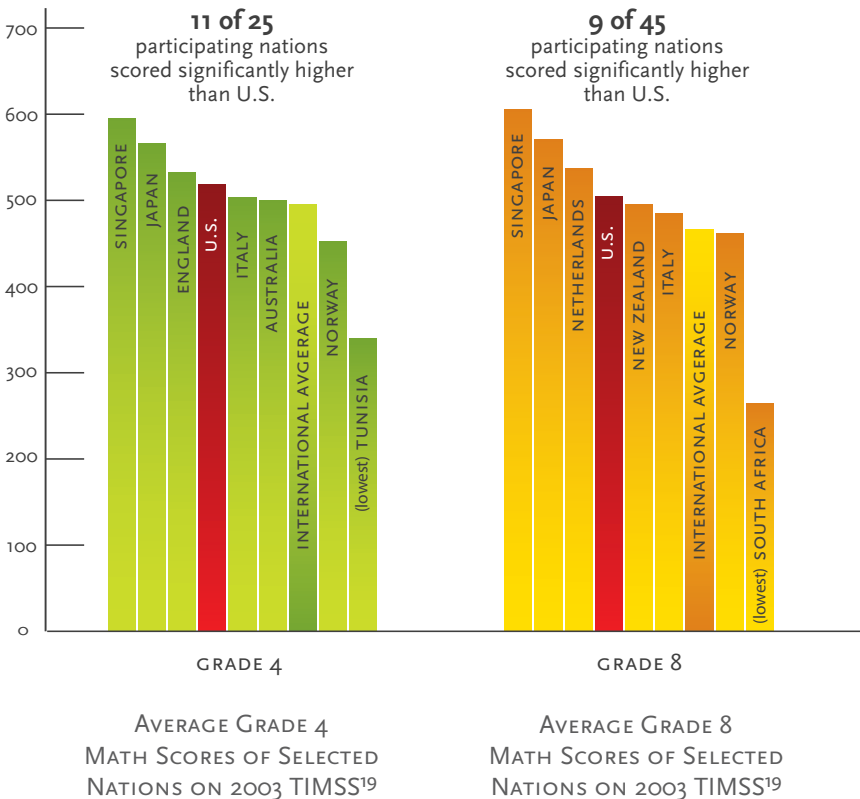


¹⁸ NAEP, *Math 2005*, figures 6 and 7; and NAEP, *Reading 2005*, figures 6 and 7. For this table, low-income students are those eligible for free or reduced-price school lunches, while students who are not low-income are those ineligible for free or reduced-price lunches. NAEP did not begin to break out scores for income groups until the 1996 math assessments and the 1998 reading assessment.

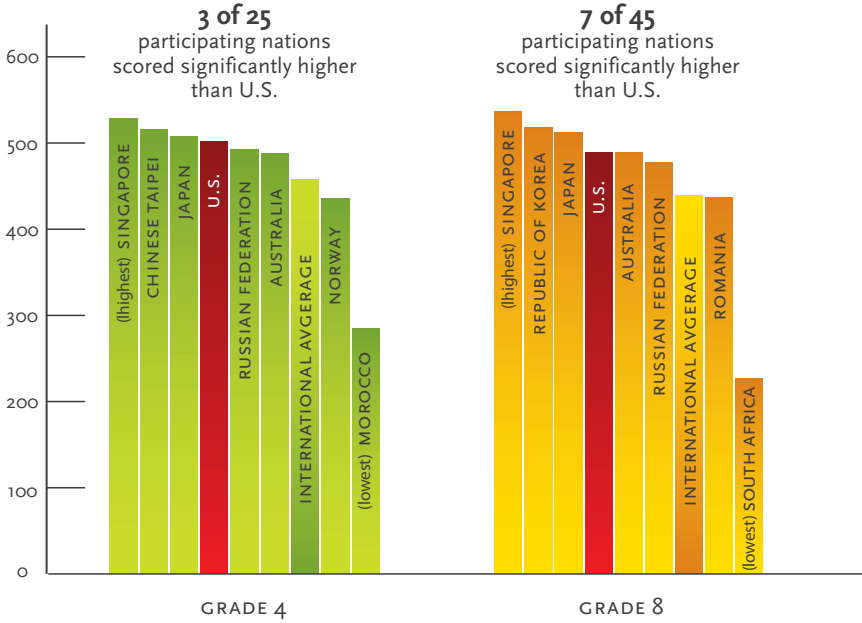
U.S. students lag behind students from many of our economic competitor nations on international assessments of science and math achievement.

Trends in International Mathematics and Science Study

In the 2003 Trends in International Mathematics and Science Study (TIMSS), U.S. students in grades 4 and 8 performed well above the international average in science; only three nations did significantly better in grade 4, while seven countries did better in grade 8. On the TIMSS math test, U.S. students scored above the international average but still performed below their peers from several other nations.



¹⁹ NCES, Trends in International Mathematics and Science Study 2003 (<http://nces.ed.gov/timss/Resultso3.asp>), table 1 and 5.



AVERAGE GRADE 4
SCIENCE SCORES OF SELECTED
NATIONS ON 2003 TIMSS²⁰

AVERAGE GRADE 8
SCIENCE SCORES OF SELECTED
NATIONS ON 2003 TIMSS²⁰

²⁰ NCES, Trends in International Mathematics and Science Study 2003
(<http://nces.ed.gov/timss/Resultso3.asp>), table 2 and 6.

Program for International Student Assessment

U.S. performance was more disappointing on the 2003 Program for International Student Assessment (PISA), which measured how well 15-year-olds apply math to practical situations. U.S. students scored 24th among the 29 member nations of the Organization for Economic Cooperation and Development.

AVERAGE COMBINED MATHEMATICS LITERACY SCORES OF
15-YEAR-OLD STUDENTS – BY SELECTED COUNTRIES (2003)²¹

	SCORE	RANK AMONG 29 NATIONS
Finland (highest)	544	1
Japan	534	4
Australia	524	8
France	511	13
Germany	503	16
International average	500	
Spain	485	23
U.S.	483	24
Italy	466	26
Mexico (lowest)	385	29

Too many students, especially students of color, drop out of high school.

Collecting accurate data on high school dropout and graduation rates is difficult because many states and school districts lack adequate systems for tracking what happens to students who leave a particular school. Thus, estimates of the dropout rate vary significantly depending on whether the data come from people's self-reports on national surveys or student enrollment data; which grade level is used as a starting point; whether young people who earn a General Equivalency Diploma (GED) instead of a regular diploma are counted as graduates; and whether only students who receive a diploma "on time" are counted as graduates.

²¹ NCES, *International Outcomes of Learning in Mathematics Literacy and Problem Solving: PISA 2003 Results from the U.S. Perspective: Highlights*, table 2.

Even as many states and the federal government take steps to improve graduation data, recent studies using different methods and data sources have reached widely varying conclusions about graduation rates. Even the higher estimates of graduation rates suggest that too many U.S. students, especially students of color, do not complete high school.

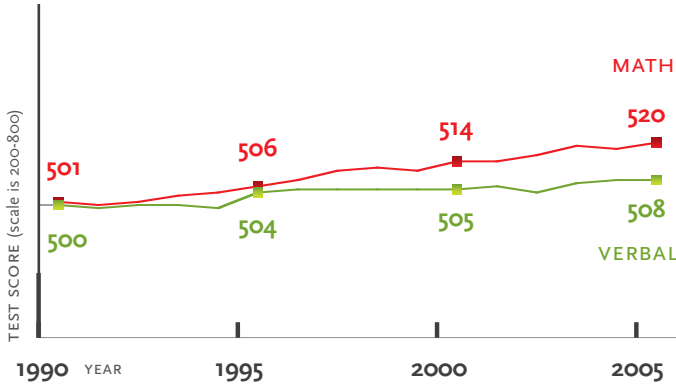
HIGH SCHOOL STUDENTS GRADUATING WITH A REGULAR DIPLOMA –
ESTIMATES FROM THREE RECENT STUDIES²²

STUDENT GROUP	Urban Institute (class of 2001)	Manhattan Institute for Policy Research (class of 2002)	Economic Policy Institute (class of 1992)
All students	68%	71%	78%
White	75%	78%	85%
Black	50%	56%	63%
Latino	50%	52%	66%
Asian	77%	n/a	93%

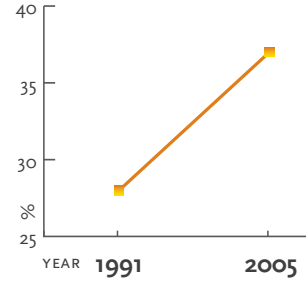
²² J. P. Greene & M. A. Winters, *Public High School Graduation and College-Readiness Rates: 1991-2002*, (Manhattan Institute for Policy Research, 2005), table 1; L. Mishel & J. Roy, *Rethinking High School Graduation Rates and Trends* (Economic Policy Institute, 2005), table 1; and C. B. Swanson, *Who Graduates? Who Doesn't? A Statistical Portrait of Public High School Graduation, Class of 2001* (Urban Institute, 2004), table 3.

Two studies estimate graduation rates for each state:
see www.manhattan-institute.org/html/ewp_08.htm -or-
www.urban.org/UploadedPDF/410934_WhoGraduates.pdf

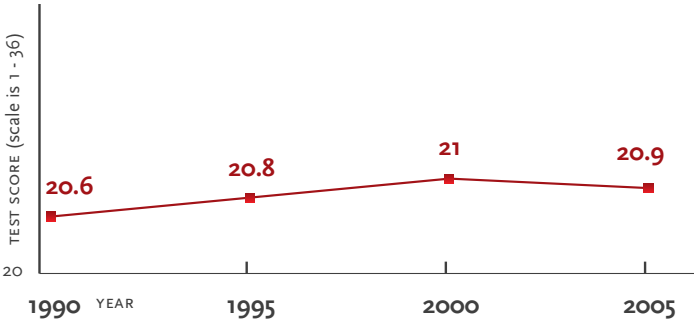
Scores on college entrance exams have increased modestly (in the case of the SAT) or held steady (in the case of the ACT). These trends have occurred even as the number of students taking these tests has reached an all-time high and the percentage of minority test-takers has grown rapidly.



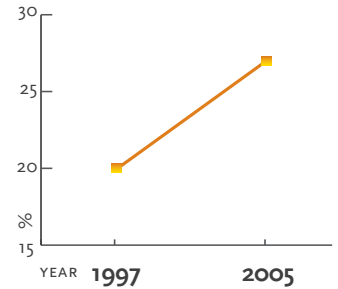
AVERAGE SAT SCORES²³



SAT TEST-TAKERS WHO ARE STUDENTS OF COLOR²³



NATIONAL AVERAGE ACT COMPOSITE SCORES²⁴



ACT TEST-TAKERS WHO ARE STUDENTS OF COLOR²⁴

²³ College Board, 2005 *College Bound Seniors*, (www.collegeboard.com/about/news_info/cbsenior/yr2005/reports.html), tables 2 and 1. In 1995, the College Board – which administers the SAT – reset or “re-centered” the midpoint score on the test. The 1990 and 1995 scores reported above have been recomputed by the College Board using the new scale, so scores are comparable to other years.

²⁴ ACT, 2005 *ACT National and State Scores* (www.act.org/news/data/05/charts/text.html); ACT, 2005 *National Score Report*, table 11; and ACT, *The 1997 ACT High School Profile Report*, table 9.

3

Who Makes the Decisions in the Public Education System?

The federal role in education expanded as a result of the No Child Left Behind Act, enacted in early 2002.

Starting in the 1960s, the federal role in education had been focused mostly on helping special groups of students, such as disadvantaged and disabled children, and addressing urgent national needs, such as improving math and science education. The No Child Left Behind Act has broadened the federal role to encompass all students and all teachers of academic subjects.

Requirements of No Child Left Behind include²⁵:

- School districts must annually test all students in grades 3-8 and high school;
- All academic teachers must have a degree in their subject area or meet other criteria to show subject matter competence;
- Districts must monitor and close achievement gaps among different groups of students, such as racial/ethnic groups;
- Nearly all English language learners and students with disabilities must take the same subject area tests and meet the same achievement goals as other students.

The U.S. public education system still is decentralized compared with the educational systems of most industrialized nations.

Although the federal role in education has expanded recently, many key education decisions are still made at the state or local level. Unlike most nations in the G-8 group, the U.S. has no national curriculum or national exam.

²⁵ Center on Education Policy, *From the Capital to the Classroom: State and Federal Efforts to Implement the No Child Left Behind Act* (2002).

NATIONAL CURRICULUM AND EXAM POLICIES IN G-8 COUNTRIES²⁶

G-8 COUNTRY	NATIONAL CURRICULUM?	NATIONAL EXAM?
Canada	No	No some provinces have high school exit exams
France	Yes	Yes for exit from lower secondary, entrance to university
Germany	No Lander (states) determine curriculum	Yes for entrance to higher education
Italy	Yes	Yes for entrance to upper secondary school, receipt of high school diploma
Japan	Yes	Yes for entrance to and placement in upper secondary school
Russia	Yes	Yes for graduation from lower secondary school, receipt of secondary completion certificate
United Kingdom	Yes with some local discretion	Yes for receipt of general certificate of secondary education (age 16) and admittance to most higher education institutions
United States	No	No some states have high school exit exams

The U.S. public education system consists of more than 14,000 autonomous school districts. About 35% of these districts are very small, enrolling fewer than 600 students.

But the very largest school districts – the largest 2% – enroll a third of all students. School districts are governed by local school boards (usually locally elected, but sometimes appointed).

14,063 Number of local school districts in the U.S. (2003-04)²⁷

²⁶ NCES, *Comparative Indicators of Education in the United States and Other G-8 Countries* (2004), figures A-1 through A-9; Mullins, et al., *TIMSS 1999: International Science Report* (International Study Center, 2000), exhibit 5.2; and Eurydice, Summary sheets on education systems in Europe (www.eurydice.org/Documents/Fiches_nationales/en/frameset_EN.html).

²⁷ NCES, *Public Elementary and Secondary Students, Staff, Schools, and School Districts: School Year 2003-04*, table C-15.

DISTRIBUTION OF SCHOOL DISTRICT – BY ENROLLMENT SIZE (2003-2004)²⁸

	Percentage of districts	Percentage of students
25,000 students or more:	2%	34%
10,000 – 24,999:	4%	19%
2,500 – 9,999:	22%	30%
1,000 – 2,499:	24%	12%
600 – 999:	12%	3%
599 and under:	35%	3%

Fundamental aspects of education vary from state to state.

RANGE OF KEY EDUCATION POLICIES AMONG STATES²⁹

9 years to 13 years	Number of years children must attend school
age 5 to age 8	Minimum age for compulsory education
age 16 to age 18	Maximum age for compulsory education
14	Number of states requiring students to attend kindergarten
173 days to 186 days	Number of required instructional days per school year
2 courses to 4 courses	Number of high school math courses all students must take (in states with minimum course requirements)
1 course to 4 courses	Number of high school science courses all students must take (in states with minimum course requirements)
30% to 74%	Percentage of total education funding provided by the state
9	Number of states requiring school districts to offer full-day kindergarten
43	Number of states requiring school districts to offer at least half-day kindergarten programs
26	Number of states requiring students to pass an exit exam before receiving a high school diploma

²⁸ NCES, *Public Elementary and Secondary Students, Staff, Schools, and School Districts: School Year 2003-04*, table C-15. Percentages do not total 100% because of rounding.

²⁹ Achieve, Inc., *The Expectations Gap: A 50-State Review of High School Graduation Requirements* (2004); Center on Education Policy, *States Try Harder But Gaps Persist: High School Exit Exams* (2005); Education Commission of the States, *Compulsory school age requirements* (March 2006), *State Notes* (www.ecs.org/clearinghouse/64/07/6407.pdf); Education Commission of the States, *Number of instructional days/hours in the school year* (July 2004), *State Notes* (www.ecs.org/clearinghouse/55/26/5526.pdf); Education Commission of the States, *State Statutes Regarding Kindergarten* (April 2005), *State Notes* (www.ecs.org/clearinghouse/58/28/5828.doc); and NCES, *Digest of Education Statistics 2005*, tables 147 and 153. Some calculations exclude Hawaii, since the state education agency also functions as the only local school district, and the District of Columbia.

Most key education policies are determined at the state and local level rather than the federal level.

EXAMPLES OF EDUCATION POLICIES TYPICALLY SET
AT THE STATE AND LOCAL LEVELS²⁸

Policies Typically Set by State Legislators or State Boards of Education

ACADEMIC STANDARDS

- Standards for curriculum content
- Goals for school district and student performance
- Student testing requirements
- Student promotion and retention policies
- Graduation requirements, including whether to require students to pass an exit exam

TEACHERS

- Teacher preparation requirements
- Teacher licensing and certification requirements
- “Right to work” or other collective bargaining laws affecting teachers’ unions

STRUCTURE

- Number of years of compulsory schooling
- Compulsory school age requirements
- Whether to require districts to offer kindergarten
- Length of school year
- Whether to allow charter schools and with what requirements

FINANCE AND FACILITIES

- Systems of financing public schools within the state

Policies Typically Determined by Local School Boards and Superintendents

ACADEMIC STANDARDS

- Specific curriculum content
- Choice of textbooks and other instructional materials
- Decisions about promoting or retaining individual students
- Student discipline and truancy policies

TEACHERS

- Teacher hiring decisions
- Collective bargaining agreements, including teacher salaries
- Job requirements
- Teacher professional development activities

STRUCTURE

- School schedule
- School attendance zones
- Class sizes

FINANCE AND FACILITIES

- Any non-instructional services to be provided by schools
- Local taxing policies for education
- School budgets
- Construction, renovation and use of school facilities

³⁰ Education Commission of the States, Unions/collective bargaining (June 2002), *State Notes* (www.ecs.org/clearinghouse/37/48/3748.pdf); Education Commission of the States, Student promotion/retention policies (November 2005), *State Notes* (www.ecs.org/clearinghouse/65/51/6551.htm); Education Week, *Quality Counts at 10: A Decade of Standards-Based Education* (2006); National School Boards Association, Key work of school boards (www.nsba.org/keywork2/); and T. Ziebarth, *The Roles and Responsibilities of School Boards and Superintendents* (Education Commission of the States, 2002).

Some communities allow parents and students a choice about which public school to attend, rather than requiring students to attend their neighborhood school. Just over 20% of students choose a different public school.

Choices within the public education system can include:

- Other public schools in the same school district or a different district (only in districts or states that allow this choice);
- Magnet schools, which have specialized curricula designed to attract students of diverse racial/ethnic backgrounds;
- Charter schools, which are publicly funded schools governed by a group under a contract or charter that exempts it from certain government regulations in exchange for meeting specified outcomes.

17% Students enrolled in a public school chosen by their parents. (2003)

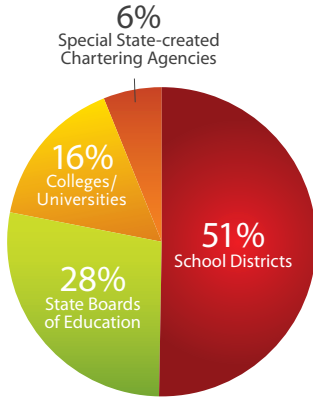
3% Students attending a magnet school. (2003-04)

2% Students attending a public charter school. (2003-04)³¹

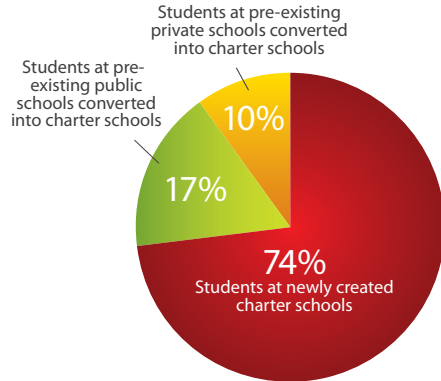
Significantly higher percentages of children may be enrolled in charter schools in some large urban districts, as the number of charter schools has grown rapidly in recent years. For example, Washington, DC, and New Orleans are two cities that have strongly encouraged the creation of charter schools.

³¹ NCES, *The Condition of Education 2004*, supplemental table 25-1; and NCES, *Public Elementary and Secondary Students, Staff, Schools, and School Districts: School Year 2003-04*, tables 10 and 11.

Forty states allow charter schools to operate, and over 3,600 charter schools are in operation, including 424 new schools that opened in the 2005-06 school year. Who approves and oversees a charter school, and how quickly charter schools are being opened, varies by state.³²



WHO AUTHORIZES CHARTER SCHOOLS (2003)³³



CHARTER SCHOOLS: NEW VS. CONVERTED SCHOOLS (2003)³³

An estimated 1.1 million school-age children were being schooled at home in 2003.

The number of home-schooled children has grown markedly since 1999, but it still represents a small share of the school-age population.

2.2% Estimated U.S. children ages 5-17 who were home-schooled (2003)³⁴

³² NCES, *Conditions of Education 2005*, table 28-1; NCES, *Digest of Education 2004*, table 99; and Center for Education Reform, All About Charter Schools, November 1, 2005 (www.edreform.com/index.cfm?fuseAction=document&documentID=1964). Figures do not total 100% because of rounding.

³³ NCES, *Conditions of Education 2005*, table 28-1; NCES, *Digest of Education 2004*, table 99; and Center for Education Reform, All About Charter Schools, November 1, 2005 (www.edreform.com/index.cfm?fuseAction=document&documentID=1964). Figures do not total 100% because of rounding.

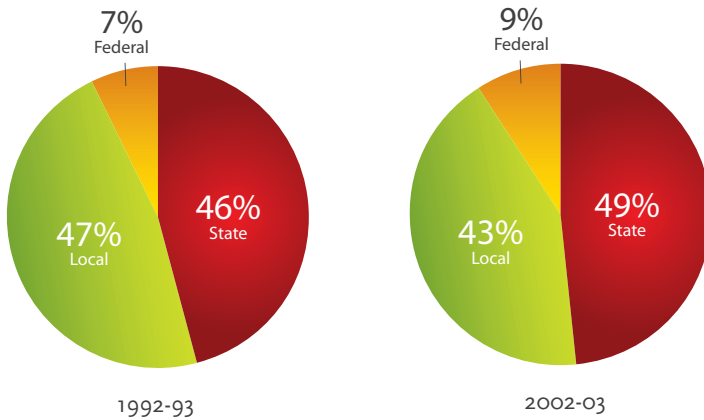
³⁴ NCES, (<http://nces.ed.gov/nhes/homeschool/>).

4

How Are Public Schools Funded?

More than 90% of funding for public education comes from state and local sources.

Over the past decade, state funding for public elementary and secondary education has grown to the point that almost half of the revenue for education comes from the states. Another 43% of education revenue comes from local sources (most of this in the form of property taxes). The federal government provides 9% of education funding.



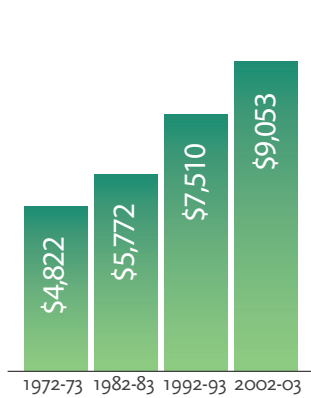
PUBLIC K-12 EDUCATION REVENUE FROM VARIOUS LEVELS OF GOVERNMENT³⁵

Education funding per student has increased considerably over the past three decades, even when adjusted for inflation.

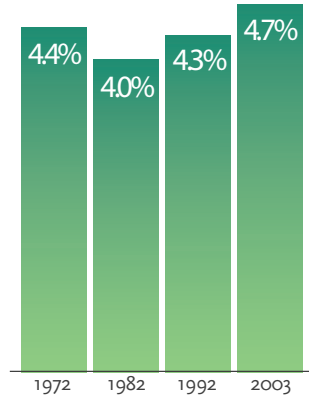
Even with increases in education spending, however, the level of public investment in education has changed only slightly in relation to the total value of goods and services produced in the domestic economy.

³⁵ NCES, *The Condition of Education 2005*, table 37-1; and NCES, *Digest of Education Statistics 2005*, table 152. Percentages do not total 100% due to rounding.

The gross domestic product (GDP) is a measure of the nation's total economic resources – the value of all goods and services produced in the domestic economy. Analyzing the percentage of the GDP devoted to education is one way of assessing the level of public effort to fund education.

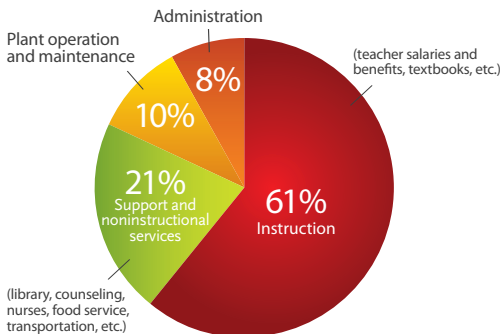


AVERAGE EXPENDITURES PER PUPIL FOR PUBLIC ELEMENTARY AND SECONDARY EDUCATION IN 2004-05 DOLLARS³⁶



EXPENDITURES FOR ALL ELEMENTARY AND SECONDARY SCHOOLS AS A PERCENTAGE OF THE U.S. GROSS DOMESTIC PRODUCT³⁷

More than 60% of education spending, on average, goes toward instruction. About 8% goes toward administration.



EXPENDITURES FOR PUBLIC ELEMENTARY AND SECONDARY EDUCATION FOR VARIOUS PURPOSES (2002-03)³⁸

³⁶ NCES, *Digest of Education Statistics 2005*, table 102.

³⁷ NCES, *Digest of Education Statistics 2005*, table 25.

³⁸ NCES, *Digest of Education Statistics 2005*, table 156.

Enormous disparities exist between high-spending and low-spending school districts, both across and within states.

Because local revenues are derived mostly from local property taxes, local spending on education is closely related to a school district’s wealth. Several states have taken steps to equalize funding among districts, but in many states, significant gaps remain.

GAPS IN PER-PUPIL EXPENDITURES BETWEEN THE HIGHEST-SPENDING AND LOWEST-SPENDING LARGE SCHOOL DISTRICTS IN THE SAME STATE (2003-04)³⁹

Highest-spending district in state	Expenditures in highest-spending district	Lowest-spending district in state	Expenditures in lowest-spending district	Gap
Arlington Hgts., IL	\$14,595	Plainfield, IL	\$6,562	-\$8,033
Arlington Co., VA	\$14,273	Bedford Co., VA	\$6,328	-\$7,945
Camden, NJ	\$15,485	Brick Twp., NJ	\$9,472	-\$6,013
Palo Alto Unified, CA	\$10,709	Victor Valley Union High, CA	\$5,125	-\$5,584
Yonkers, NY	\$15,148	No. Syracuse, NY	\$9,856	-\$5,292
Atlanta, GA	\$11,502	Columbia Co., GA	\$6,580	-\$4,922
Pittsburgh, PA	\$12,242	Reading, PA	\$7,340	-\$4,902

AVERAGE PER-PUPIL SPENDING FOR PUBLIC ELEMENTARY AND SECONDARY EDUCATION: HIGHEST AND LOWEST STATE (2002-03)⁴⁰

\$13, 211 New York (highest spending)

\$5,247 Utah (lowest spending)

³⁹ U.S. Census Bureau, *Public Education Finances 2004*, table 17. Figures do not include school districts that are under state control, administered by a county government, or smaller than 10,000 students.

⁴⁰ NCES, *Digest of Education Statistics 2005*, table 167.

Most states have faced or are still facing lawsuits challenging their systems of financing public education – and about 75% of these lawsuits have been successful.

Since the late 1980s, lawsuits have emphasized language in many state constitutions that promises an “adequate” education for all students – and plaintiffs have won the majority of these cases. In states where the school finance systems has been found unconstitutional, state leaders have had to restructure their school funding systems to provide more money to low-spending districts or districts with high numbers of special needs or low-income students – a complex process that often takes years more to settle.

- 38** Total number of states sued since 1989 for inadequate education finance systems
- 21** States in which plaintiffs won (court found state school finance system unconstitutional)
- 7** States in which the state won (court upheld current school finance system)
- 10** States with lawsuits still pending (includes states where earlier cases were settled but new or additional suits have been filed)⁴¹

In addition to paying for K-12 public schools, more states are creating and funding pre-kindergarten programs to help students enter school ready to learn. Public elementary schools are the primary place for the delivery of these programs.

- 44** States funding some early learning programs for young children (2000-01)
- 12** States offering pre-kindergarten to all 4-year-olds, regardless of socioeconomic factors (2000-01)
- 6** States providing no pre-kindergarten program (2000-01)⁴²

⁴¹ Campaign for Educational Equity, School funding “adequacy” decisions since 1989, April 6, 2006 (www.schoolfunding.info/litigation/).

⁴² Education Commission of the States, *Pre-Kindergarten: Quick Facts*, (www.ecs.org/ecsmain.asp?page=/html/issue.asp?issueID=184).

5

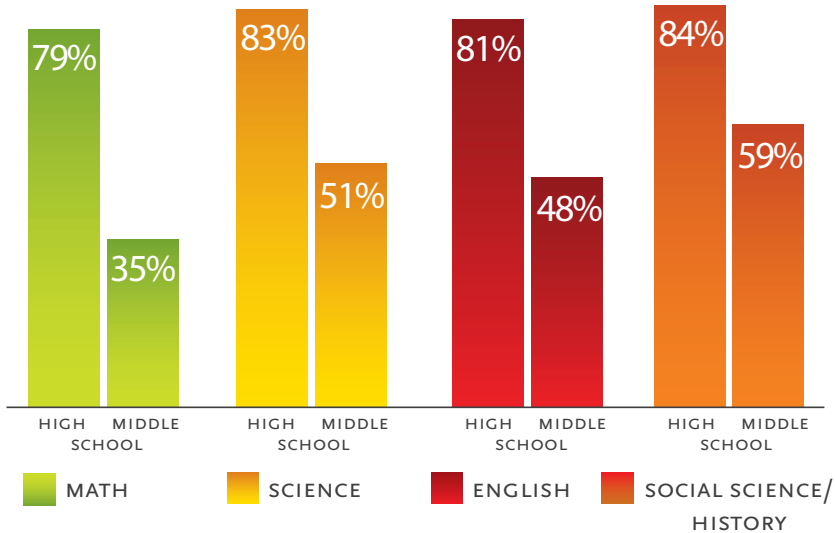
What Is the Public School Teaching Force Like?

Almost half of all teachers have advanced degrees, and the majority have more than 10 years of experience. However, degrees held by middle and high school teachers are not always in the main academic subject they teach.

47% Elementary and secondary teachers with a master's degree or higher (1999-2000)

58% Elementary and secondary teachers with 10 or more years full-time teaching experience (1999-2000)⁴³

TEACHERS WITH AN UNDERGRADUATE OR GRADUATE MAJOR AND CERTIFICATE IN THE MAIN SUBJECT THEY TEACH (1999-2000)⁴⁴



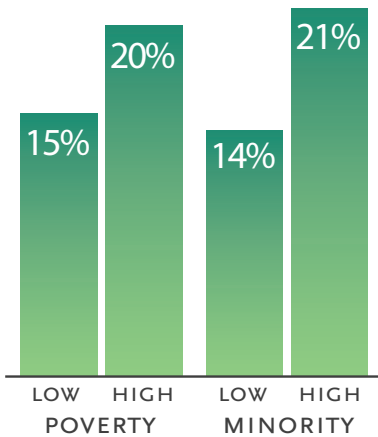
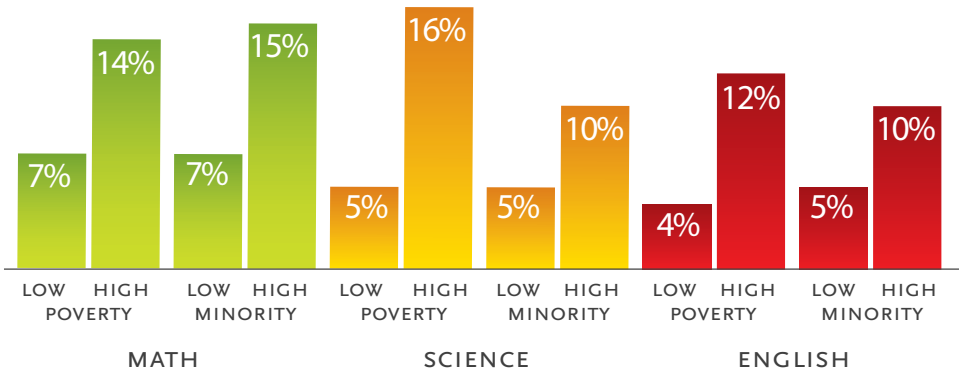
⁴³ NCES, *Digest of Education Statistics* 2005, table 66.

⁴⁴ NCES, *Qualifications of the Public School Teacher Workforce: Prevalence of Out-of-Field Teaching 1987-88 to 1999-2000*, tables B-2 and B-3.

Students in high schools with large numbers of low-income or minority students are more often taught by “out-of-field” or less experienced teachers than students in low-poverty or low-minority enrollment schools.

“Out of field” teachers are those who lack a specific certification or a college major in the field they teach.

HIGH SCHOOL STUDENTS TAUGHT BY OUT-OF-FIELD TEACHERS BY SCHOOL POVERTY CONCENTRATION AND MINORITY STUDENT ENROLLMENT (1999-2000)⁴⁵

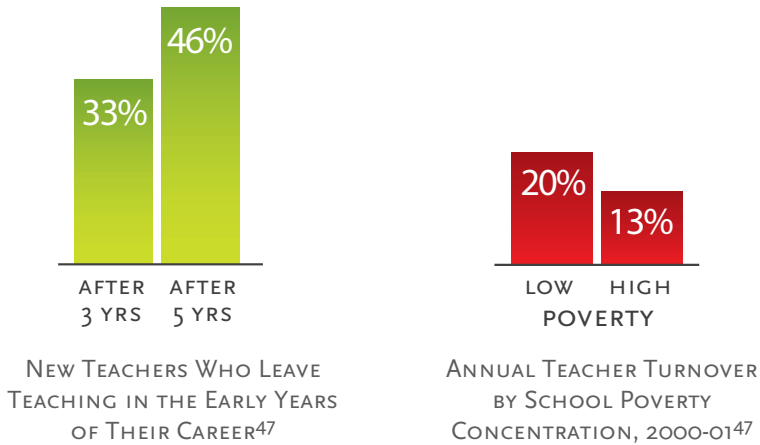


FULL-TIME TEACHERS WITH THREE YEARS' EXPERIENCE OR LESS BY SCHOOL POVERTY CONCENTRATION AND MINORITY ENROLLMENT (1999-2000)⁴⁶

⁴⁵ NCES, *The Condition of Education 2004*, indicator 24. In this table, high-poverty schools are those in which 75% or more of the students are eligible for free or reduced-price lunch; in low-poverty schools, less than 10% of the students are eligible for free or reduced-price lunch. High-minority schools are those in which 75% or more of the students are from racial/ethnic minority groups; in low-minority schools, less than 10% of the students are from minority groups.

⁴⁶ NCES, *The Condition of Education 2003*, table 29-2.

High rates of new teachers end up leaving the profession during their first five years. Teacher turnover and attrition are worse in high-poverty schools.



The average salary for public school teachers is about \$46,000, which – after adjusting for inflation – is about 2% higher than a decade ago.

\$35,029 Annual salary of all teachers (1992-93)⁴⁸

\$45,822 Annual salary of all teachers (2002-03)⁴⁸

⁴⁷ National Commission on Teaching and America's Future, *No Dream Denied: A Pledge to America's Children* (2003) figures 2 and 3. For this figure, high-poverty schools are those in which 80% or more of the students are eligible for free or reduced-price lunches; low-poverty schools are those in which less than 10% of the students are eligible for subsidized lunches.

⁴⁸ NCES, *Digest of Education Statistics 2004*, table 77.

What Factors Cause Differences in Student Achievement?

As this primer shows, there are large gaps between the achievement of white students and minority students and between low-income and high-income students in the education system. One of the most helpful efforts to answer the question of which factors seem to cause these gaps was published by the Education Testing Service in 2003.

For the report *Parsing the Achievement Gap*, Paul Barton – a senior research associate at the organization and a former senior official in the federal Education and Labor Departments – synthesized research findings to identify those factors most strongly linked to achievement differences among different students. “Achievement differences in school among subgroups of the population have deep roots,” writes Barton. “They arrive early and stay late – beginning before the cradle and continuing through to graduation, if that happy outcome is obtained.”

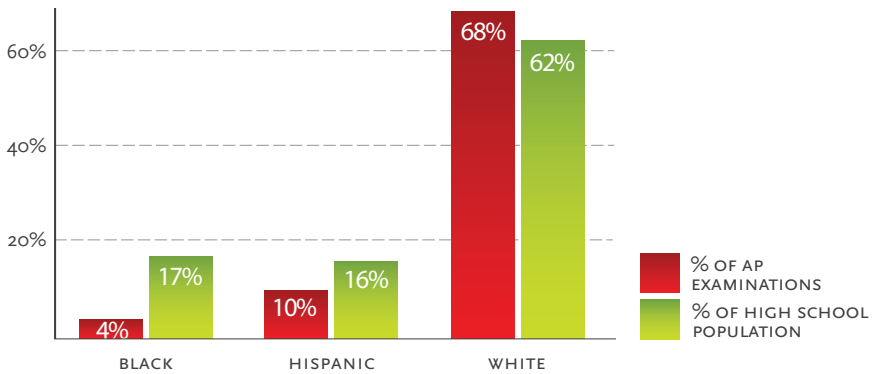
Barton finds 14 factors, some in-school and some out-of-school, that have the strongest connection with higher or lower student achievement. He cautions that these correlates should be viewed as the best-researched representatives of a group of similar factors; none is unique in demand for attention and, in many cases, the correlates are interrelated. He also suggests that none of these correlates – nor focusing solely on in-school factors or out-of-school factors – presents a silver-bullet solution.

We’ve summarized and annotated Barton’s key conclusions below. The complete version of this short report is available for free online at: www.ets.org/Media/Research/pdf/PICPARSING.pdf.

IN SCHOOL FACTORS

Teaching and Learning (a school’s instructional “infrastructure”)

- **How rigorous is the curriculum?** Academic programs promote academic achievement; students can’t learn world-class skills and knowledge if they aren’t taught them. However, black and Latino students perform worse on Advanced Placement exams, for example, suggesting they’ve never been taught this more rigorous curriculum.
- **Do teachers know the subject they are teaching well?** The academic skills and knowledge of teachers make a huge difference in what



DISTRIBUTION OF ADVANCED PLACEMENT EXAMINATIONS COMPARED WITH THE DISTRIBUTION OF THE HIGH SCHOOL POPULATION, BY RACE/ETHNICITY, 1999/2002⁴⁹

students are able to learn at school. However, the rate of teachers in high-poverty schools without credentials in the subject they are teaching is double the rate of such teachers in low-poverty schools.

- **Are the teachers experienced?** Children taught by a teacher with five years of experience make more progress during a school year than do children taught by a first-year teacher. However, experienced teachers are not spread evenly – teachers with three or fewer years of experience are much more likely to be in schools with a high level of minority enrollment than in schools with a low enrollment, for example.
- **How large are elementary school classrooms?** Studies find higher achievement – especially for minority and disadvantaged students – in elementary school classes that are smaller than 20 students. However, despite many efforts across the country to reduce class sizes, a larger percentage of minority students and lower-income students remain in larger classes.
- **Are schools using technology to support instruction?** Computers are becoming ubiquitous in all schools, and Internet access is steadily increasing. However, schools with large numbers of minority or low-income students still report less availability and lower usage.

⁴⁹ AP examinations are for 2002; high school population data are for 1999. Sources: AP data are from the College Board; high school population data are from National Center for Education Statistics, *Digest of Education Statistics 2001*, Table 42.

The Learning Environment (the school's conditions and expectations)

- **Is the school environment safe?** A lack of student discipline and an atmosphere that produces fear in students are not conducive to learning. However, the reporting of fear of an attack at school or on the way to school is about twice as frequent for black and Latino students as for white students, with 10% of minority students reporting such fears.

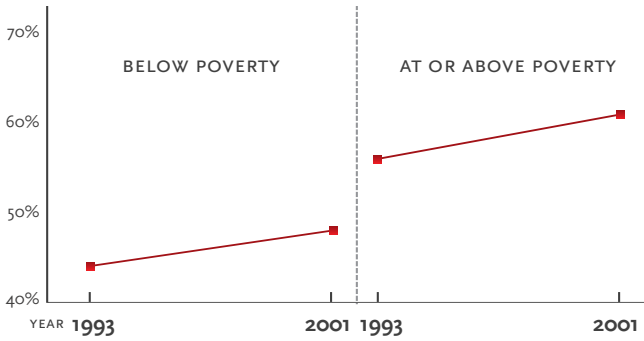
BEFORE AND BEYOND SCHOOL

The Development Environment (children's early experiences)

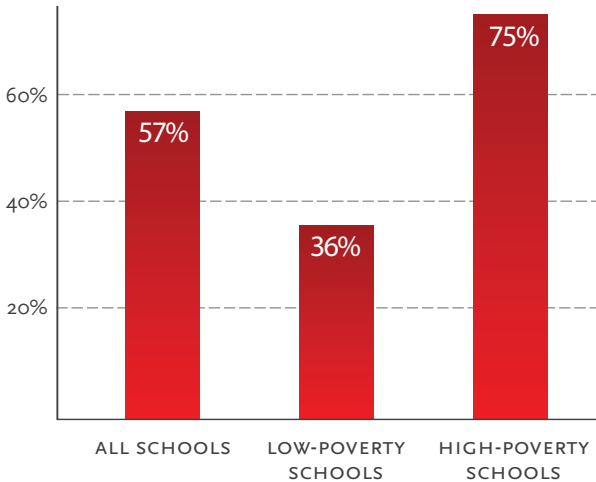
- **What were children's birth-weights?** Low birth-weight can lead to severe problems ranging from mortality to learning problems. However, there is wide variation in the incidence of low birth-weight by race and ethnicity; the highest is among black infants, at 13% in 2000.
- **Were children exposed to lead?** Although the number of children exposed to lead has been declining, approximately 434,000 children younger than six years of age have blood levels of lead "high enough to adversely affect their intelligence, behavior and development," according to the Centers for Disease Control. However, children in minority and low-income families have a higher risk of being exposed to lead than others; they are more likely to live in older dwellings that still have lead paint.
- **Are children hungry?** The importance of adequate nutrition for the development of the mind and body is broadly accepted. However, black and Latino households experience hunger at two to three times the rate of white households.

The Home-Learning Connection (support for learning in the home)

- **Are young children read to at home?** Reading to young children promotes language acquisition and correlates with achievement in reading comprehension and general success in school. However, children in poverty are read to considerably less than children who are not in poverty.
- **How much TV are children watching?** Eighth graders who watched more than five hours of television per day had the lowest average mathematics scores in all countries participating in the Third International Math and Science Study in 1995. Among U.S. fourth graders, 27% of students of parents with less than a high school education, compared with 17% of those whose parents had graduated from college, watched six hours or more per day.



PERCENTAGE OF CHILDREN AGES 3 TO 5 WHO WERE READ TO EVERY DAY IN THE LAST WEEK, BY POVERTY LEVEL (1993-2001)⁵⁰



TEACHERS REPORTING LACK OF PARENT INVOLVEMENT IS MODERATE OR SERIOUS PROBLEM, 2000⁵¹

- **Are there two parents in the home?** Research shows large differences in achievement between children from two-parent and one-parent families, due in part to the effect of the lower incomes of one-parent, one-paycheck families, typically headed by a female

⁵⁰ Children who had not yet entered kindergarten. Source: Federal Interagency Forum on Child and Family Statistics, *America's Children: Key National Indicators of Well-Being, 2002*, Table ED1, p. 104. Original data from the NCES *National Household Education Survey*.

⁵¹ *Education Week*, "Quality Counts", 2003, p. 62 (<http://counts.edweek.org/sreports/qco3/reports/17work-tb.cfm>).

earning less than a male would. However, children from minority families are much less likely to have access to two parents in the home, with 75% of white children living with two parents, compared with 65% of Latino children and just 38% of black children. Nine percent of black children live with neither parent.

The Community (how communities support or hinder the efforts of families and schools)

- **Have children changed schools frequently?** A change in schools can mean that a student faces work he or she is not prepared for, a teacher who is not familiar with the student's prior learning, and an environment where the student has to deal with being an outsider who has to make all new friends. However, the percentage of black and Latino students who are frequent school changers is double that of white students; the percent of such students from low-income families is triple that of high-income families.

The Home-School Connection (how parents and schools coordinate and work together)

- **Are parents actively engaged in school activities?** Students with parents who are involved in their school tend to have fewer behavioral problems and better academic performance, and are more likely to complete secondary school, than students whose parents are not involved. On some measures of parental involvement, such as whether parents attend a scheduled meeting with a teacher, there is little difference by race/ethnicity or measures of family income. However, as the degree of involvement increases, large differences emerge.

Notes on Methodology and Sources

Barton sought to identify school and home conditions that the research community, to a reasonable extent, agrees are closely associated with school achievement. For school factors, Barton relied on *Monitoring School Quality: An Indicators Report* by the federal government's National Center for Education Statistics. For non-school factors, he used data from Child Trends, a research organization that conducts and synthesizes research across the broad area of child well-being. Barton also reminds readers that *Parsing the Achievement Gap* is not about specific school interventions or programs to improve instruction, or evaluations of their effectiveness.

Make a Difference:

Consider These 7 Critical Needs in K-12 Education

While everyone has a stake in improved public schools, it's sometimes difficult to know how to make a difference – and where to begin making contributions that address important needs or accelerate change.

As a place to start, we encourage you to consider the following seven areas of critical need for education philanthropy, which are based on the facts presented in this **Primer** on the U.S. education system. These areas represent places where needs are greatest or where research suggests that added focus can make a difference in student outcomes – and thus where philanthropic investments might leverage bigger changes.

Here are some areas where needs in K-12 public schools are greatest – and where philanthropy is in an ideal position to help:

1. Since racial, ethnic, and income-based achievement gaps between students are not closing fast enough, and since U.S. students are behind students from several other nations in science and math...

Support efforts and school designs aimed at both closing achievement gaps and raising overall student performance.

2. Since high-quality preschool experiences and in-home reading experiences can help mitigate the effects of poverty and other social drains on achievement...

Expand high-quality preschool programs and efforts that encourage students and parents to read at home.

3. Since black, Latino, and low-income students – the groups with the most significant achievement gaps – tend to be concentrated in urban areas...

Target reforms on inner-city schools.

4. Since the percentages of immigrants and English language learners is growing...

Focus on ways to help students learn English quickly and well while ensuring they master academic subjects.

5. Since decision-making authority in education is shifting more to the state and federal levels...

Support advocacy efforts – including well-targeted research, communications efforts, or community engagement activities – to change public opinion and to influence and improve federal and state education policies.

6. Since teachers need more training in the subjects they teach and better incentives to stay in the profession and teach in schools with the greatest needs...

Support programs and strategies that strengthen teacher skills and content knowledge, especially in high-poverty and high-minority schools, and support innovative approaches to improving teacher pay and providing incentives for the most qualified.

7. Since dropout rates have not improved, especially for Latino and urban students...

Support efforts that encourage students to stay in school and take courses that are both relevant and put them on a track to college.

Of course, how you might choose to work in these areas – whether by identifying new innovations, underwriting efforts to scale-up promising strategies, investing in research or supporting policy change, for example – can vary pretty dramatically. Let your values, your interests and your answers to the questions we pose in the workbook be your guide. In particular, think about how you will be most effective addressing these issues – by working through existing schools or school districts, helping to create new schools or initiatives, or supporting nonprofits and leaders outside the system? – and which area of influence – individuals or organizations, for example – feels most comfortable for you.

Finally, it's important to recognize the public policy environment in which schools today operate. Since the mid-1990s, every state but Iowa has moved to set clearer standards for what students should be learning, tests that measure student progress at key points, and new accountability measures to encourage schools and students to boost performance. The federal No Child Left Behind Act, enacted in early 2002, further accelerated this move towards clearer standards and tougher accountability measures and created a new nationwide plan for schools to close student achievement gaps.

These two changes mean that many schools are already working diligently to improve student achievement and have their own plans for what needs to improve and how. Thus, donors should be mindful that their efforts to accelerate change in schools do just that – and don't distract school leaders with new, tangential strategies or support piecemeal reform efforts.

In conceptualizing and designing the IMPROVING PUBLIC EDUCATION guide, we benefited from the advice and insights of these individuals:

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