

Massachusetts

State Highlights 2016
Corrected 1/26/16



Called to Account

New Directions
in School Accountability

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Massachusetts—State Highlights 2016

A special supplement to *Education Week's Quality Counts 2016*

Called to Account: New Directions in School Accountability

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About this Report

The 20th annual edition of *Education Week's Quality Counts* continues the tradition of tracking key indicators and grading the states on their performance and outcomes. This year's installment examines how new state and federal strategies are transforming the assessment of school performance and reshaping the consequences for poor results. As the newly enacted Every Student Succeeds Act – the long-awaited successor to the federal No Child Left Behind Act – raises fresh questions about the future direction of accountability, *Education Week* journalists explore options for holding schools to high standards while simultaneously improving student achievement.

To complement the report's journalism, the Education Week Research Center conducted an original analysis of student achievement in the No Child Left Behind era, which highlights results on the National Assessment of Educational Progress from 2003 to 2015. The analysis examines overall achievement, poverty-based gaps, and trends over time.

To offer a comprehensive perspective on state performance, the 2016 State Highlights Reports provide summative grades focused on educational outcomes. The 2016 summative grades are based on three key indices making up *Quality Counts'* State of the States framework: the Chance-for-Success Index; K-12 Achievement Index; and school finance. Results for all three of these categories have been updated for this year's report.

Overall findings show that some states consistently perform strongly or poorly across the full range of graded categories. However, most states post a strong showing in at least one area. This suggests that a deeper reading of the results presented in this State Highlights Report will provide a more nuanced perspective on the educational condition of the nation and the states.

Education Week Research Center
January 2016

The *Quality Counts 2016* report, published as the Jan. 7 issue of *Education Week* and online, included errors in the school finance analysis. This *State Highlights Report* has been revised to correct grades, scores, and rankings in summative results and school finance. Details are available at www.edweek.org/go/qc16correct.

About Editorial Projects in Education

Editorial Projects in Education (EPE) is a nonprofit, tax-exempt organization based in Bethesda, Md. Its primary mission is to help raise the level of awareness and understanding among professionals and the public of important issues in American education. EPE covers local, state, national, and international news and issues from preschool through the 12th grade. Editorial Projects in Education publishes *Education Week*, America's newspaper of record for precollegiate education, the online *Teacher*, and *Digital Directions* channels, and the TopSchoolJobs employment resource. It also produces periodic special reports on issues ranging from technology to textbooks, as well as books of special interest to educators.

The **Education Week Research Center** conducts policy surveys, collects data, and performs analyses that appear in *Education Week* and its special reports. The center also conducts independent research studies and maintains the Education Counts data resource.

QUALITY COUNTS 2016 GRADING SUMMARY

OVERALL GRADE

A state's overall grade is the average of the scores for the three graded categories.

Massachusetts: **B+**

Rank: 1

Nation: C

Online extra

Calculate your own *Quality Counts* grades at

<http://www.edweek.org/go/qc16calculate>

Massachusetts

grade

rank

How did the
average state
score?

Chance for success (2016)

A-

1

C+

School finance (2016)

B

12

C

K-12 achievement (2016)

B

1

C-

Quality Counts Grading Breakdown

This table reports the detailed scoring behind the grades for the three major topics examined in *Quality Counts*. Scores for those major categories are based on the respective subcategory scores.

Massachusetts
U.S.
Average

The Grading Framework

Chance for success (2016)

<i>Early foundations</i>	94.2	82.6
<i>School years</i>	92.6	74.7
<i>Adult outcomes</i>	89.1	77.5

School finance
analysis (2016)

<i>Equity</i>	82.0	84.8
<i>Spending</i>	84.0	63.9

K-12 achievement (2016)

<i>Status</i>	94.8	65.8
<i>Change</i>	77.9	69.1
<i>Equity</i>	81.1	83.5

The 20th annual edition of *Quality Counts* features newly updated 50-state grades in three areas monitored by the report on an ongoing basis: the Chance-for-Success Index, K-12 Achievement Index, and school finance. To provide a comprehensive perspective on state performance, summative grades integrate results for all three of those categories.

The report card has evolved through the years, taking on its current, streamlined form in 2015. Summative grades issued since that time are not directly comparable to those from prior reports.

Grading Curve A (93-100), A- (90-92), B+ (87-89), B (83-86), B- (80-82), C+ (77-79), C (73-76), C- (70-72), D+ (67-69), D (63-66), D- (60-62), F (0-59)

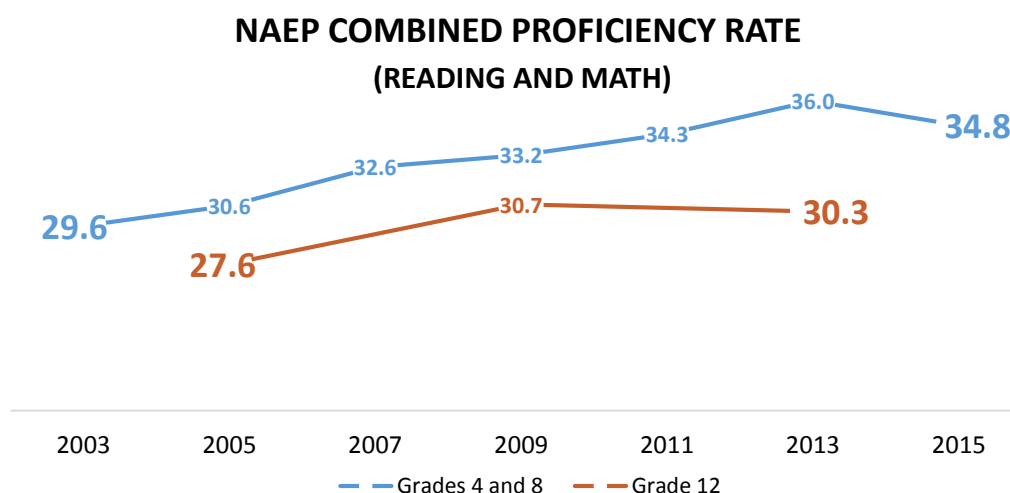
ACHIEVEMENT TRENDS

Student Achievement in an Era of Accountability

The No Child Left Behind Act, signed into law in January 2002, ushered in an unprecedented role for federal policies intended to hold schools accountable for student achievement. To shed light on performance in the NCLB era, the Education Week Research Center averaged the percent of students scoring at the "proficient" level or above on NAEP reading and math tests in grades 4 and 8 to create an overall proficiency rate. The results in this analysis are based on this combined proficiency metric for states and the nation.

Progress in Student Achievement

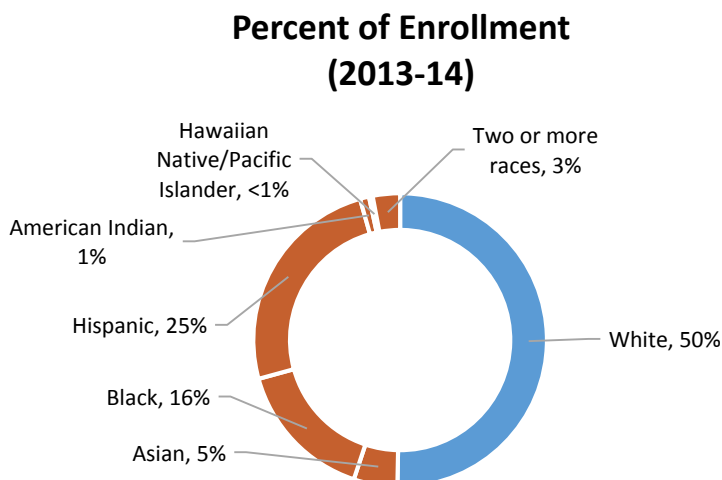
When viewed over time, scores on NAEP indicate a modest degree of improvement in the nation's academic achievement. From 2003 to 2015, the combined proficiency rate for 4th and 8th graders in reading and math increased from 29.6 percent to 34.8 percent. Although this long-term pattern signals progress, a 1.2 point decline between 2013 and 2015 makes the future direction of achievement trends more uncertain. At the high school level, the combined proficiency rate for 12th graders climbed from 27.6 percent in 2005 to 30.3 percent in 2013, the most recent year of data available.



SOURCE: Education Week Research Center analysis of data from U.S. Department of Education, 2003-2015

Gains Occur Amid Growing Diversity

The nation's achievement gains between 2003 and 2015 took place during a period when the student population became more diverse. In the 2002-03 school year, about 4 in 10 students enrolled in pre-K through grade 12, nationwide, were non-white. By 2013-14, non-white students made up half of the nation's public school population.



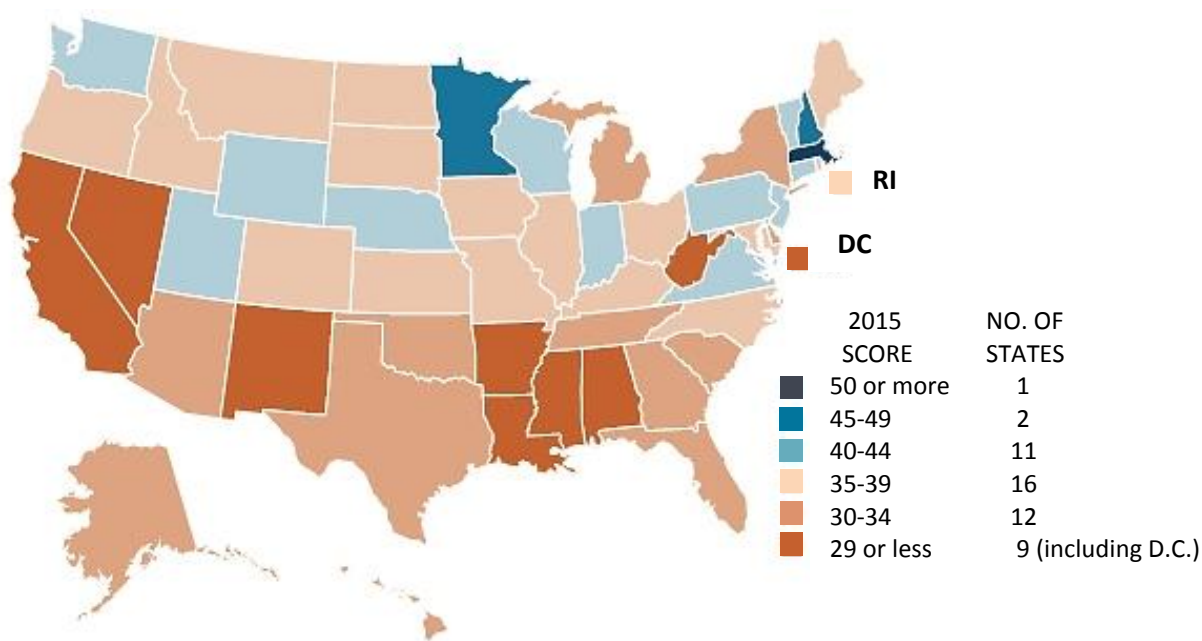
SOURCE: Education Week Research Center analysis of data from U.S. Department of Education, 2003-2014

Achievement Analysis

	Massachusetts		
From <i>Quality Counts 2016</i>	State Average	Rank	National Average
NAEP Combined Proficiency Rate			
Proficiency rate 4th and 8th grade reading and math (2015)	50.0%	1	34.8%
Proficiency-rate change 4th and 8th grade reading and math (2003-2015)	+9.2	5	+5.2
Poverty gap-free or reduced-price lunch (noneligible minus eligible) 4th and 8th grade reading and math (2015)	35.1	48	30.1
Poverty-gap change (negative value = closing gap) 4th and 8th grade reading and math (2003-2015)	+2.3	11	+3.8

Achievement Varies Across States

A sizable gap separates the highest- and lowest-scoring states on NAEP. Massachusetts was the only state with a combined proficiency rate reaching 50 percent in 2015. Two other states—Minnesota and New Hampshire—record rates between 45 percent and 49 percent. By contrast, rates in nine states are below 30 percent.



SOURCE: Education Week Research Center analysis of data from U.S. Department of Education, 2015

CHANCE-FOR-SUCCESS

The Chance-for-Success Index

The Education Week Research Center developed the Chance-for-Success Index to better understand the role of education across an individual's lifetime. Based on an original state-by-state analysis, this index combines information from 13 indicators that span a person's life from cradle to career. The Chance-for-Success framework allows states to identify strong and weak links in their residents' educational life course—their typical trajectory from childhood through adulthood. More importantly, the index also provides information that could be used to target the efforts of public education systems in ways that better serve students of all ages.

State Success Indicators			
From <i>Quality Counts 2016</i>	Massachusetts State Average	Rank	National Average
Early Foundations			
Family income Children from families with incomes at least 200% of poverty level (2014)	70.2%	1	56.0%
Parent education Children with at least one parent with a postsecondary degree (2014)	62.7	1	48.1
Parental employment Children with at least one parent working full time and year-round (2014)	75.8	21	74.4
Linguistic integration Children whose parents are fluent English-speakers (2014)	84.6	38	83.2
School Years			
Preschool enrollment Three- and 4-year-olds enrolled in preschool (2014)	58.5	4	47.1
Kindergarten enrollment Eligible children enrolled in kindergarten programs (2014)	78.5	16	77.8
Elementary reading Fourth grade public school students proficient on NAEP (2015)	49.7	1	34.8
Middle school mathematics Eighth grade public school students proficient on NAEP (2015)	50.8	1	32.1
High school graduation Public high school students who graduate with a diploma (class of 2012)	86.0	12	81.0
Postsecondary participation Young adults enrolled in postsecondary education or with a degree (2014)	70.3	2	55.2
Adult Outcomes			
Adult educational attainment Adults with a two- or four-year postsecondary degree (2014)	52.6	2	40.4
Annual income Adults with incomes at or above national median (2014)	61.3	3	50.0
Steady employment Adults in labor force working full time and year-round (2014)	70.1	41	71.6
GRADE	A-	1	C+

Opportunities for Success

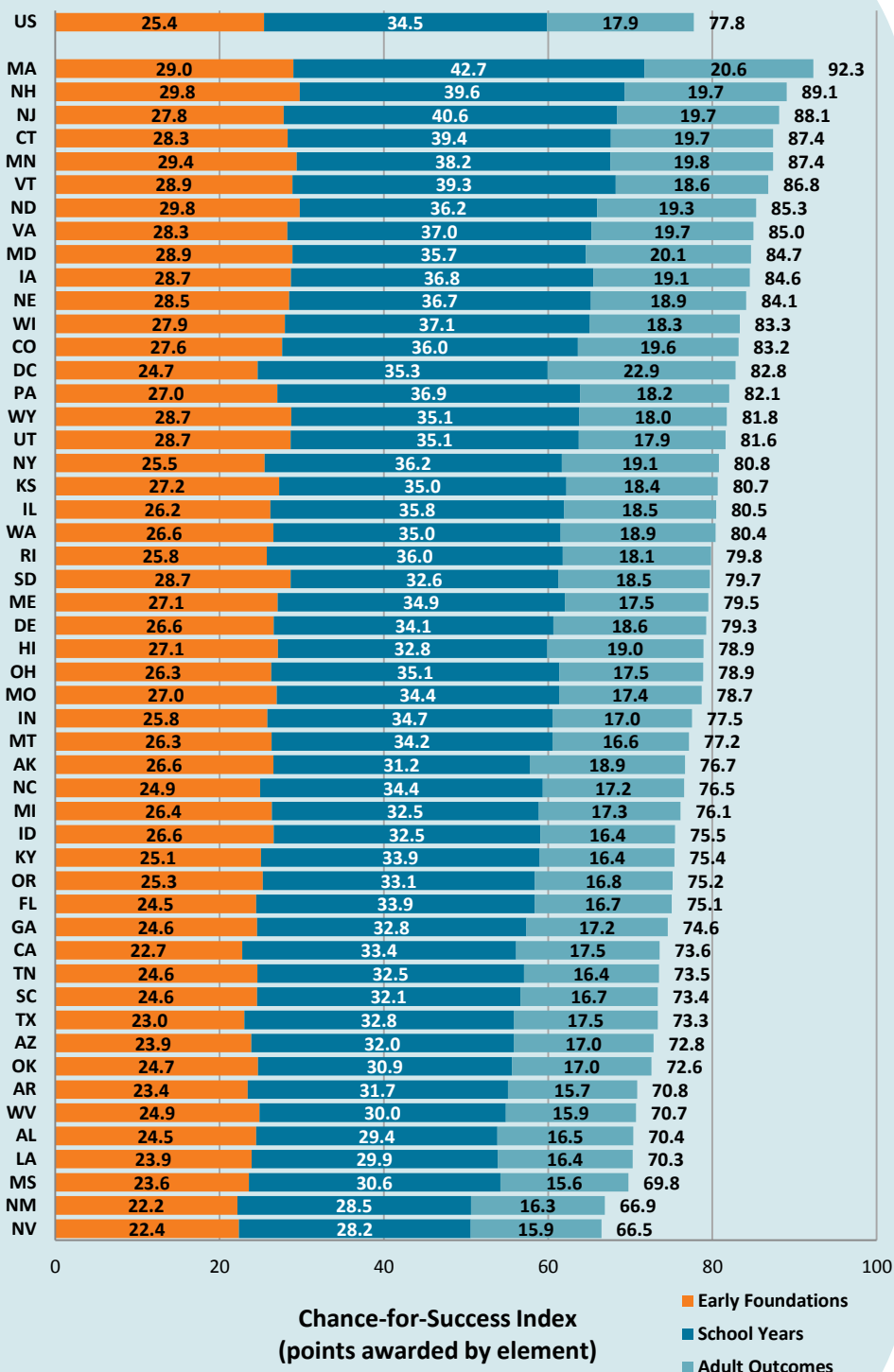
The Chance-for-Success Index captures the importance of education in a person's lifetime from cradle to career. Its 13 individual indicators span a variety of factors, including preparation in early childhood, the performance of the public schools, and educational and economic outcomes in adulthood.

The states are graded using a "best in class" rubric, where a score of 100 points on the index would mean that a state ranked first in the nation on each and every indicator.

State scores range from 92.3 (Massachusetts, earning an A-) to 66.5 (Nevada, with a D). A closer examination of results shows that, while early foundations and adult outcomes do contribute to the index, indicators related to formal education (the schooling years) are the driving force behind the state rankings.

Note: State subscores may not sum to total score due to rounding.

SOURCE: Education Week Research Center, 2016



ELEMENTARY AND SECONDARY PERFORMANCE

The K-12 Achievement Index

The K-12 Achievement Index examines 18 distinct state achievement measures related to reading and math performance, high school graduation rates, and the results of Advanced Placement exams. The index assigns equal weight to current levels of performance and changes over time. It also places an emphasis on equity, by examining both poverty-based achievement gaps and progress in closing those gaps.

State Achievement Indicators

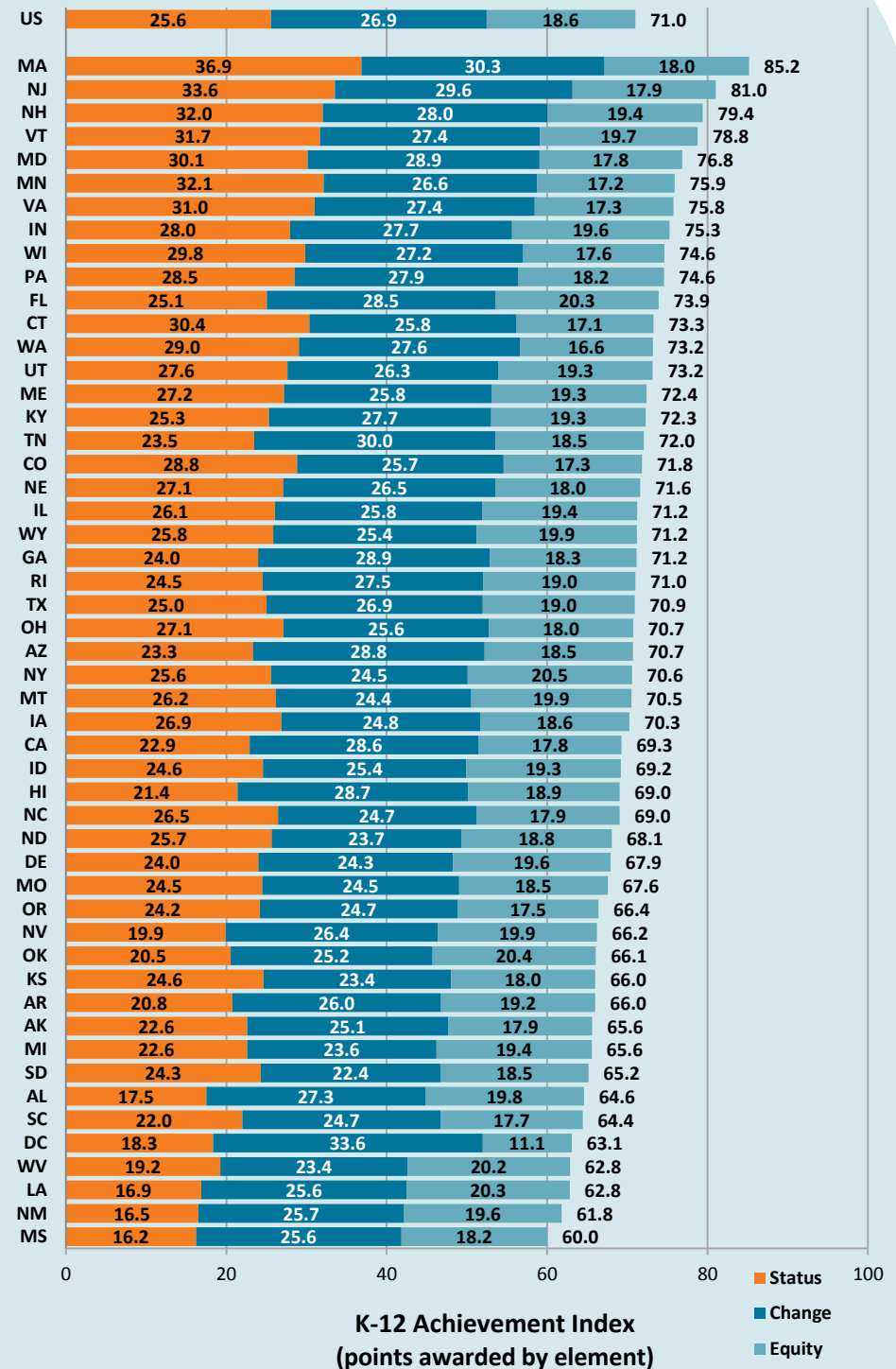
From <i>Quality Counts 2016</i>	Massachusetts		National Average
	State Average	Rank	
Achievement Levels			
4th grade math – Percent proficient on NAEP (2015)	53.9%	1	39.4%
8th grade math – Percent proficient on NAEP (2015)	50.8%	1	32.1%
4th grade reading – Percent proficient on NAEP (2015)	49.7%	1	34.8%
8th grade reading – Percent proficient on NAEP (2015)	45.7%	1	32.7%
Achievement Gains			
4th grade math – Scale-score change on NAEP (2003-2015)	+8.9	9	+5.9
8th grade math – Scale-score change on NAEP (2003-2015)	+10.4	5	+5.2
4th grade reading – Scale-score change on NAEP (2003-2015)	+7.7	11	+4.9
8th grade reading – Scale-score change on NAEP (2003-2015)	+1.6	31	+2.7
Poverty Gap (National School Lunch Program, noneligible minus eligible)			
Reading gap – 4th grade NAEP scale score (2015)	27.1	32	27.5
Math gap – 8th grade NAEP scale score (2015)	32.2	48	27.8
Reading-gap change – 4th grade NAEP (2003-2015), negative value = closing gap	+0.6	24	-0.4
Math-gap change – 8th grade NAEP (2003-2015), negative value = closing gap	-1.6	10	-0.6
Achieving Excellence			
Math excellence – Percent advanced on 8th grade NAEP (2015)	18.2%	1	7.8%
Change in math excellence – Percent advanced on NAEP (2003-2015)	+9.8%	2	+2.8%
High School Graduation			
Graduation rate – Public schools (class of 2012)	86.0%	12	81.0%
Change in graduation rate – Public schools (2002-2012)	+8.4%	18	+8.4%
Advanced Placement			
High AP test scores – Scores of 3 or higher per 100 students (2014)	39.7	4	29.3
Change in AP Scores – Change in high scores per 100 students (2000-2014)	+27.0	6	+20.2
GRADE	B	1	C-

Nation Earns Mediocre Grade on Achievement

The Education Week Research Center's K-12 Achievement Index awards states points based on three distinct aspects of student achievement: current levels of performance (status), improvements over time (change), and achievement gaps between poor and non-poor students (equity).

The nation as a whole earns 71.0 points, on a 100-point scale, for a grade of C-minus. The leading state, Massachusetts, earns 85.2 points and a B, while Mississippi finishes last with a score of 60.0.

Massachusetts is the only state to earn an A in the status category. In the change category, the District of Columbia posts the only B, the highest grade in the nation. Seven states top the nation in equity, with grades of A-minus.



NOTE: State subscores may not sum to total score due to rounding.

SOURCE: Education Week Research Center, 2016

SCHOOL FINANCE ANALYSIS

Equity and Spending Indicators

From <i>Quality Counts 2016</i>	Massachusetts		National
	State Average	Rank	Average
Equity (2013)			
Wealth-Neutrality Score – Relationship between district funding and local property wealth	0.130	22	0.134
McLoone Index – Actual spending as percent of amount needed to bring all students to median level	91.9%	17	90.7%
Coefficient of Variation – Amount of disparity in spending across districts within a state	0.179	36	0.166
Restricted Range – Difference in per-pupil spending levels at the 95th and 5th percentiles	\$7,086	42	\$4,665
Spending (2013)			
Adjusted per-pupil expenditures (PPE) – Analysis accounts for regional cost differences	\$13,546	14	\$11,841
Students funded at or above national average – Percent of students in districts with PPE at or above U.S. average	99.4%	9	39.8%
Spending Index – Per-pupil spending levels weighted by the degree to which districts meet or approach the national average for expenditures	100.0	9	89.3
Spending on education – State expenditures on K-12 schooling as a percent of state taxable resources	3.4%	23	3.4%

GRADE

B

12

C

Definitions of School Finance Indicators

Wealth-Neutrality Score: The wealth-neutrality score shows the degree to which state and local revenue are related to the property wealth of districts. A negative score means that, on average, poorer districts spend more dollars per weighted pupil than do wealthy districts. A positive score means the opposite: Wealthy districts have more funding per weighted pupil than poor districts.

McLoone Index: The McLoone Index is based on the assumption that if all students in the state were lined up according to the amount their districts spent on them, perfect equity would be achieved if every district spent at least as much as that spent on the pupil in the middle of the distribution, or the median. The McLoone Index is the ratio of the total amount spent on pupils below the median to the amount that would be needed to raise all students to the median per-pupil expenditure in the state.

Coefficient of Variation: The coefficient of variation is a measure of the disparity in funding across school districts in a state. The value is calculated by dividing the standard deviation of adjusted spending per pupil by the state's average spending per pupil. The standard deviation is a measure of dispersion (i.e., how spread out spending levels are across a state's districts). If all districts in a state spent exactly the same amount per pupil, its coefficient of variation would be zero. As the coefficient gets higher, the variation in the amounts spent across districts also gets higher. As the coefficient gets lower, it indicates greater equity.

Restricted Range: This indicator captures the differences in funding levels found between the highest- and lowest-spending districts in a state. The index value is calculated as the difference in per-pupil spending levels at the 95th and 5th percentiles. Districts enrolling fewer than 200 students are excluded from the analysis.

Spending Index: The Spending Index takes into account both the proportion of students enrolled in districts with spending at the national average, and the degree to which spending is below that benchmark in districts where per-pupil expenditures fall below the national average. Each district in which the per-pupil-spending figure (adjusted for student needs and cost differences) reaches or exceeds the national average receives a score of 1 multiplied by the number of students in the district. A district whose adjusted spending per pupil is below the national average receives a score equal to its per-pupil spending divided by the national average and then multiplied by the number of pupils in the district. The Spending Index is the sum of district scores divided by the total number of students in the state. If all districts spend above the U.S. average, the state attains a perfect index score of 100 points.

Note: The District of Columbia and Hawaii are single-district jurisdictions. As a result, it is not possible to calculate measures of financial equity, which capture the distribution of funding across districts within a state. The District of Columbia and Hawaii do not receive grades for school finance and are not included in the rankings reported in this table.

NOTES AND SOURCES

Quality Counts 2016

This year's 20th edition of *Quality Counts* examines student achievement in the NCLB accountability era by highlighting NAEP results from 2003 to 2015. *Quality Counts 2016* also provides a 50-state update on results in three distinct areas: Chance for Success, K-12 Achievement, and school finance.

The State Highlights Reports present state-specific summaries of key findings across the three performance categories that comprise the report's state-grading rubric. Reports for the 50 states and the District of Columbia are available on the Web at www.edweek.org/go/qc16.

How We Graded the States

The Chance for Success, K-12 Achievement, and school finance are scored using a best-in-class rubric. Under this approach, the leading state on a particular indicator receives 100 points, and other states earn points in proportion to the gaps between themselves and the leader.

To compute a state's score for a given category, we average points across the applicable set of indicators. On a best-in-class scale, a state's overall score for a category can be gauged against an implicit standard where 100 points would correspond to a state that finished first in the nation on each and every measure.

A state's overall summative score is the average of the three graded categories: Chance for Success, K-12 Achievement, and school finance.

The methodology section of *Quality Counts* provides detailed descriptions of our indicators and procedures for grading the states. That information can be accessed online at www.edweek.org/go/qc16.

Performance Indicators

Quality Counts regularly tracks and grades state progress in three categories comprising roughly 40 different state-by-state indicators. Most of these 50-state indicators are based on original analyses of federal data. The report also draws on published information from other organizations.

Indicators are derived from the sources listed in the notes that follow.

Chance for Success (2016)

Elementary Reading and Middle School Mathematics: 2015 State NAEP assessment. U.S. Department of Education, 2015.

High School Graduation: Averaged Freshman Graduation Rate (AFGR) 2011-12. National Center for Education Statistics, Public High School Four-Year-On-Time Graduation Rates and Event Dropout Rates: School Years 2010-11 and 2011-12, April 2014.

Other Indicators: Education Week Research Center analysis of data from the U.S. Census Bureau's American Community Survey, 2014.

K-12 Achievement (2016)

Reading and Mathematics Achievement: 2015 State NAEP assessment. U.S. Department of Education, 2015.

High School Graduation: Averaged Freshman Graduation Rate (AFGR) 2011-12. National Center for Education Statistics, Public High School Four-Year-On-Time Graduation Rates and Event Dropout Rates: School Years 2010-11 and 2011-12, April 2014.

Advanced Placement: Education Week Research Center analysis of data from the College Board's AP Summary Reports 2014,

and the U.S. Department of Education's Common Core of Data, 2013-14.

School Finance Analysis (2016)

Original Education Week Research Center Analysis of Equity and Spending: Data for these analyses were obtained from a variety of sources, including: U.S. Census Bureau's Public Elementary-Secondary Education Finance Data for 2013; U.S. Department of Education's Common Core of Data (CCD) 2011-12 and 2012-13 (district-level data); NCES Comparable Wage Index 2013, as updated by Lori Taylor of Texas A&M University; U.S. Census Bureau's Small-Area Income and Poverty Estimates 2013; U.S. Department of Education's School District Demographics data, based on the 2008-13 American Community Survey; U.S. Census Bureau, Public Education Finances: 2013, June 2015; and 2013 gross-state-product data from the U.S. Department of Commerce's Bureau of Economic Analysis.

Achievement Analysis

The Education Week Research Center conducted an original analysis of NAEP test scores. Demographic data are provided for context for this achievement analysis. The center's analysis highlights poverty gaps and trends over time. These indicators are not included in the states' summative grades.

NAEP Combined Proficiency Rate and Proficiency-Rate Change: Education Week Research Center analysis of data from 2003-2015 NAEP assessment.

NAEP Poverty Gap and Poverty-Gap Change: Education Week Research Center analysis of data from 2003-2015 NAEP assessment.

Demographic Data: Education Week Research Center analysis of data from the U.S. Department of Education's Common Core of Data, 2003-2014.

QUALITY COUNTS 2016

Called to Account

New Directions in School Accountability

The 20th edition of *Quality Counts* examines accountability for student achievement. The print edition of the report also provides a 50-state update of results in three areas monitored by the report on an ongoing basis: Chance for Success, K-12 Achievement, and school finance.

Highlights from this year's report

A comprehensive look at **educational accountability**, including timely journalistic coverage and original data analyses

Education Week Research Center's **Chance-for-Success Index**, a cradle-to-career perspective on the importance of education throughout a person's lifetime

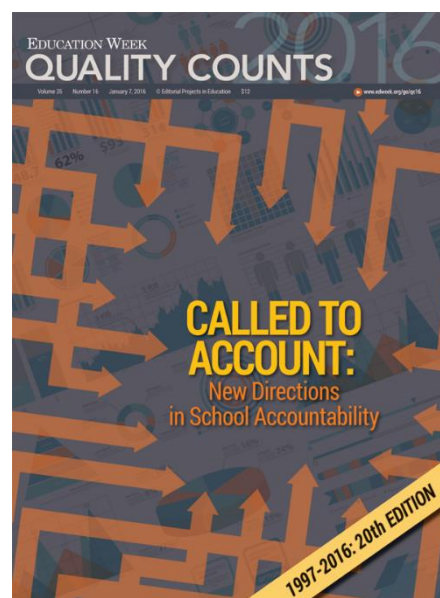
State of the States—Our comprehensive annual review of state performance, this year highlighting: Chance for Success, K-12 Achievement, and school finance

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