

Massachusetts

State Highlights 2015

Preparing to Launch

Early Childhood's
Academic Countdown



A Special Supplement to *Education Week's*

QUALITY COUNTS 2015



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Massachusetts—State Highlights 2015
A special supplement to *Education Week's Quality Counts 2015*
Preparing to Launch: Early Childhood's Academic Countdown

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About this Report

The 19th annual edition of *Education Week's Quality Counts* continues the tradition of tracking key education indicators and grading the states on their performance and outcomes. This year's report also focuses on early-childhood education as its special theme, examining how new academic demands and accountability pressures are altering the learning environment for young children and the educators serving them. *Education Week* journalists drill down on the policy debates, research studies, and technological challenges shaping the landscape for early schooling.

To complement the report's journalism, the Education Week Research Center conducted an original analysis of participation in early-education, poverty-based gaps in enrollment, and trends over time. The center's Early Education Index features state grades based on federal data across those critical indicators.

To offer a comprehensive perspective on state performance, the 2015 State Highlights Reports provide summative grades focused on educational outcomes. The 2015 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 the Chance for Success Index and school finance have been updated for this year's report. The K-12 Achievement Index was last updated for *Quality Counts 2014*.

Overall findings from *Quality Counts* show that some states perform consistently well or poorly across the full range of graded categories. However, a closer examination of the results reveals that most states post a strong showing in at least one area. This suggests that while broad evaluations of state rankings and performance can be useful, 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 2015

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*, *Digital Directions*, and *Industry & Innovation* 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—*Quality Counts*, *Technology Counts*, and *Diplomas Count*. The center also conducts independent research studies and maintains the Education Counts and EdWeek Maps online data resources.

QUALITY COUNTS 2015 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/qc15calculate>

	Massachusetts		How did the average state score?
	grade	rank	
Chance for success (2015)	A-	1	C+
School finance (2015)	B	10	C
K-12 achievement (2014)	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
Chance for success (2015)		
Early foundations	92.3	81.3
School years	93.8	75.6
Adult outcomes	87.4	76.5
School finance analysis (2015)		
Equity	82.0	85.1
Spending	84.0	65.4
K-12 achievement (2014)		
Status	94.2	65.6
Change	77.5	68.3
Equity	76.2	81.7

The Grading Framework Evolves

The 19th annual edition of *Quality Counts* takes a fresh approach to the state report card. In 2014, the report took a hiatus from summative grades in order to step back and reassess the education policy landscape. This year, those grades return in a newer, leaner form that focuses on outcomes rather than on policy and processes. The grading incorporates three key indices: the Chance-for-Success Index; K-12 Achievement Index; and the school finance analysis. A state's summative score is the average of the three graded categories.

From 2008 to 2013, the grading framework for *Quality Counts*' State Highlights Reports evaluated states on a wider range of education indicators. Summative grades from those past reports are not directly comparable to those issued this year.

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)

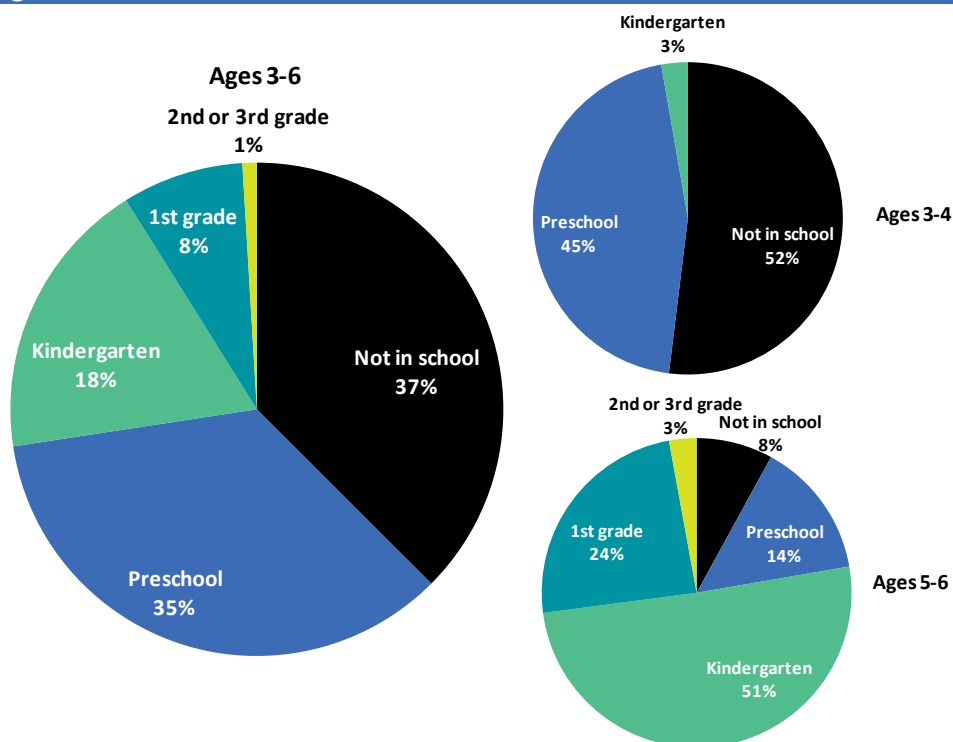
EARLY-EDUCATION ANALYSIS

Patterns in School Participation

The Education Week Research Center analyzed American Community Survey data from 2008-2012 to identify patterns in the school enrollment of young children. Nationally, most—but not all—children ages 3 to 6 are enrolled in school. Results indicate that preschool participation is heavily influenced by a range of socioeconomic factors, including household income, parental education levels, and race and ethnicity. The state where a child lives also has an impact.

School Enrollment Among Young Children

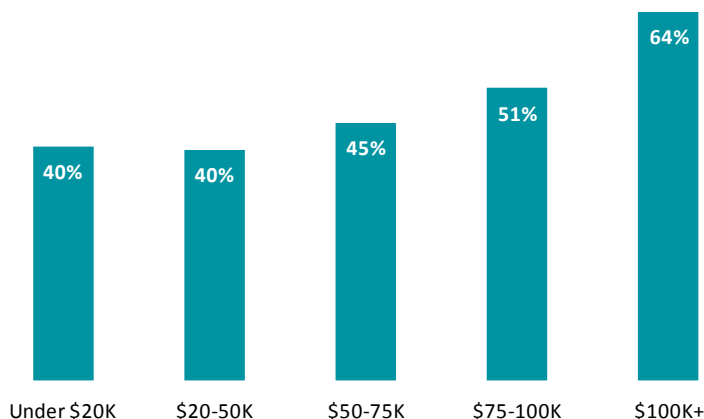
Nearly two-thirds of children between 3 and 6 years of age are attending school. The majority of those children are participating in either preschool (35 percent) or kindergarten (18 percent) programs, with smaller percentages enrolled in the early elementary grades. Thirty-seven percent of children in this age range are not in school. More than half (52 percent) of 3- and 4-year-olds are not in school. By contrast, only 8 percent of 5- and 6-year-olds are not enrolled in an education program. The majority of youngsters that age attend kindergarten.



SOURCE: Education Week Research Center, 2015

Income's Impact

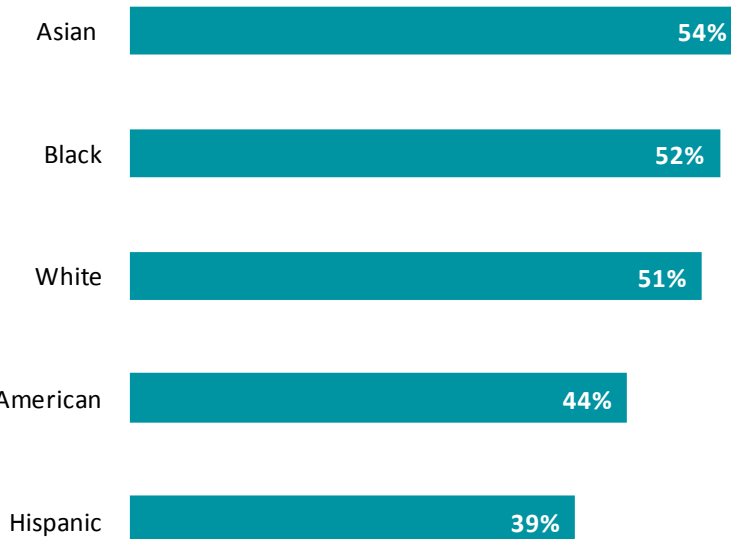
Children from the most affluent households have the highest rates of preschool participation. Sixty-four percent of 3- and 4-year-olds in households earning \$100,000 or more participate in preschool programs. At the other end of the spectrum, where household income is below \$20,000, only 4 in 10 children are enrolled.



SOURCE: Education Week Research Center, 2015

Race and Ethnicity

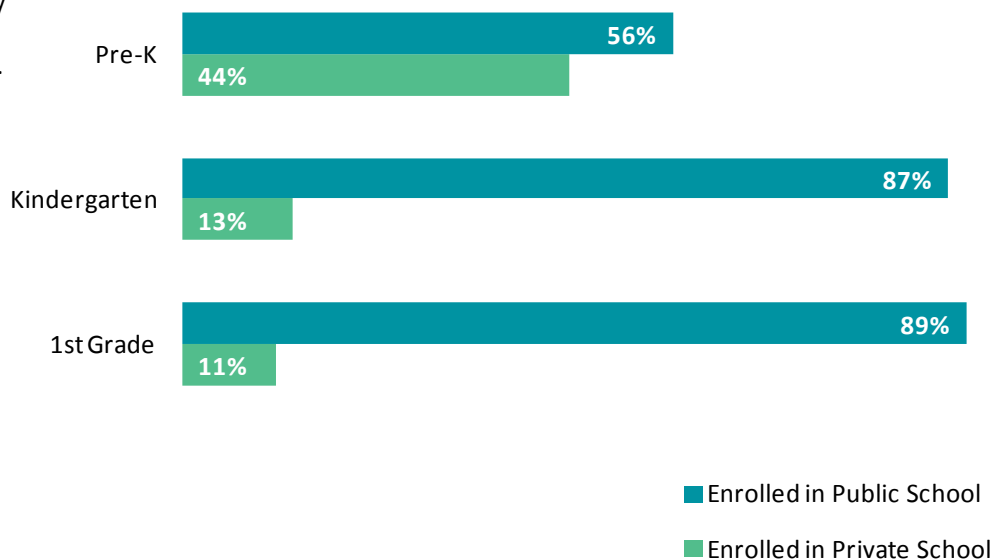
Roughly half of Asian, black, and white 3- and 4-year-olds are enrolled in preschool, compared with about 4 in 10 Hispanic and Native American youngsters.



SOURCE: Education Week Research Center, 2015

Enrollment in Public and Private Education

Private education providers serve a substantial share of the nation's preschool population. By contrast, private schools educate a relatively small percentage of all kindergarten students. Four in 10 children enrolled in preschool attend private programs, compared with only about 1 in 10 kindergartners.

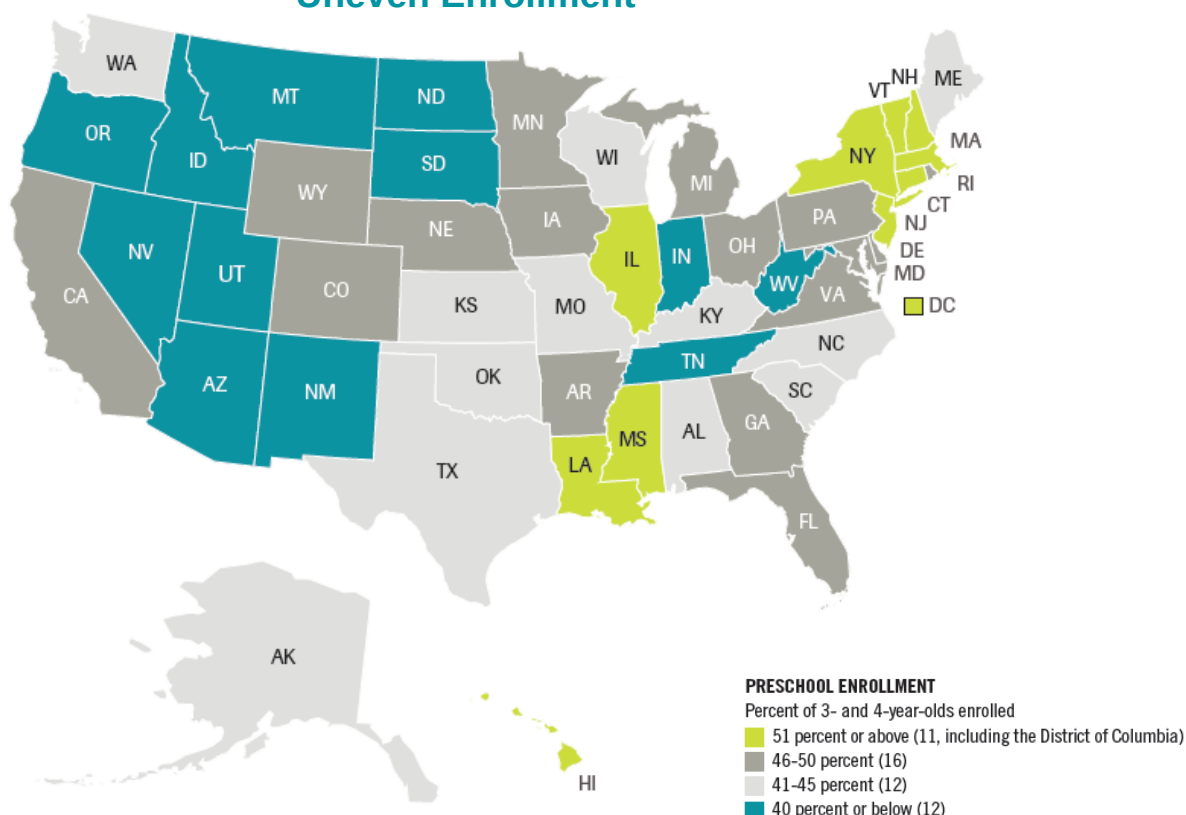


SOURCE: Education Week Research Center, 2015

Early Education Index

From <i>Quality Counts 2015</i>	Massachusetts		National
	State Average	Rank	Average
Preschool			
Preschool enrollment Three- and 4-year-olds enrolled in preschool (2013)	59.5%	4	47.3%
Preschool enrollment gains Change in percent of 3- and 4-year-olds enrolled (2008-2013)	-1.3	39	-0.3
Preschool poverty gap Enrollment rate for non-poor children minus poor children (2013)	17.2	38	15.8
Preschool poverty-gap change Change in enrollment gap (2008-2013), negative value = closing gap	+3.4	39	+0.7
Full-day preschool Students attending full-day programs (2013)	42.1	32	49.0
Head Start enrollment Enrollment as a percentage of 3- and 4-year-olds in poverty (2013)	41.2	22	35.9
Kindergarten			
Kindergarten enrollment Eligible children enrolled in kindergarten programs (2013)	78.8	11	77.7
Full-day kindergarten Students attending full-day programs (2013)	76.2	29	75.0
	GRADE	C-	27
			D+

Uneven Enrollment



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.

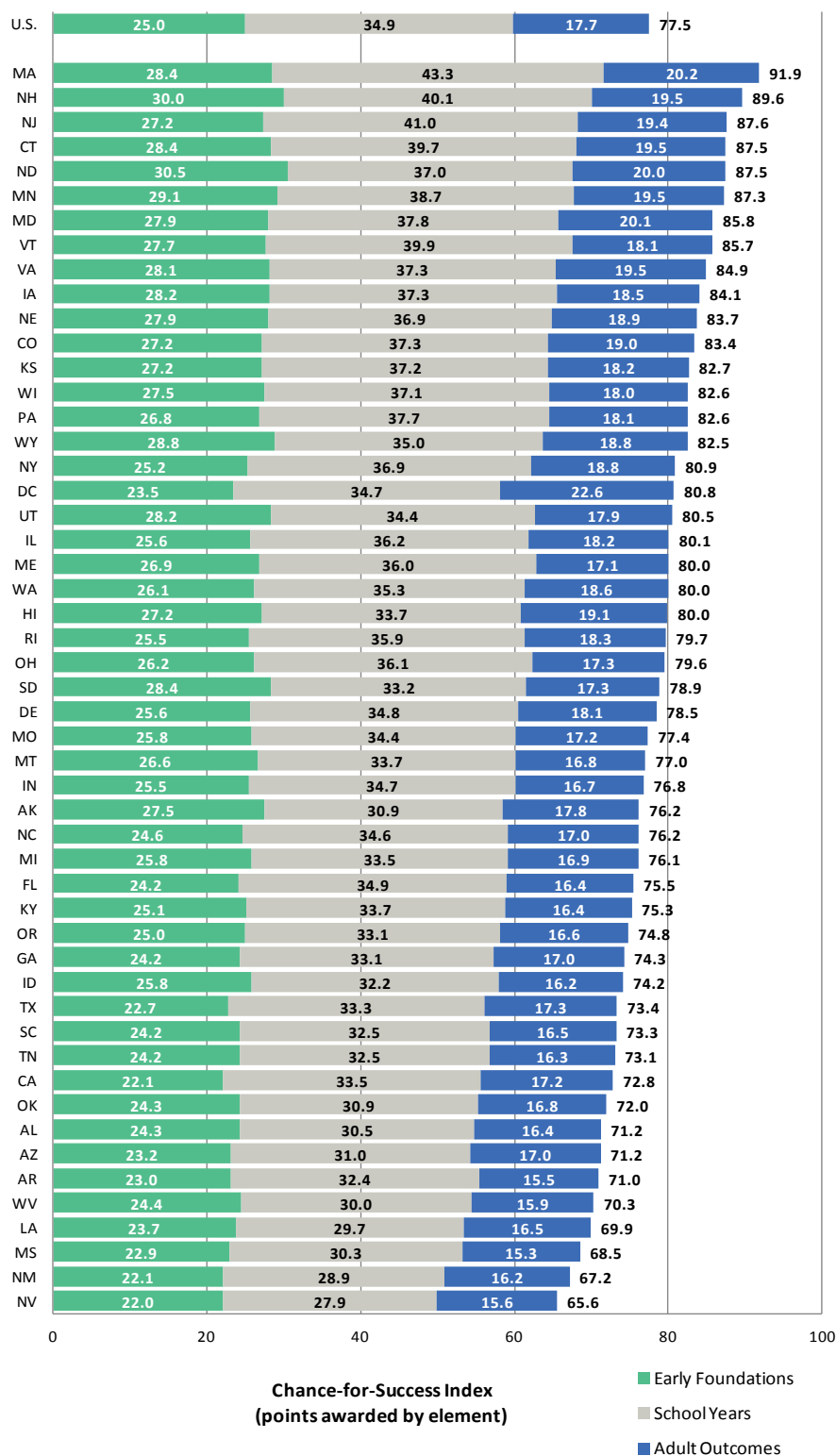
State Success Indicators			
From <i>Quality Counts 2015</i>	Massachusetts State Average	Rank	National Average
Early Foundations			
Family income Children from families with incomes at least 200% of poverty level (2013)	69.5%	4	55.4%
Parent education Children with at least one parent with a postsecondary degree (2013)	61.4	3	47.2
Parental employment Children with at least one parent working full time and year-round (2013)	74.0	22	73.3
Linguistic integration Children whose parents are fluent English-speakers (2013)	84.2	39	83.2
School Years			
Preschool enrollment Three- and 4-year-olds enrolled in preschool (2013)	59.5	4	47.3
Kindergarten enrollment Eligible children enrolled in kindergarten programs (2013)	78.8	11	77.7
Elementary reading Fourth grade public school students proficient on NAEP (2013)	47.5	1	34.0
Middle school mathematics Eighth grade public school students proficient on NAEP (2013)	54.6	1	34.4
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 (2013)	70.2	2	55.1
Adult Outcomes			
Adult educational attainment Adults with a two- or four-year postsecondary degree (2013)	51.3	2	39.9
Annual income Adults with incomes at or above national median (2013)	60.6	4	50.0
Steady employment Adults in labor force working full time and year-round (2013)	69.1	39	70.4
	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 91.9 (Massachusetts, earning an A-) to 65.6 (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.



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

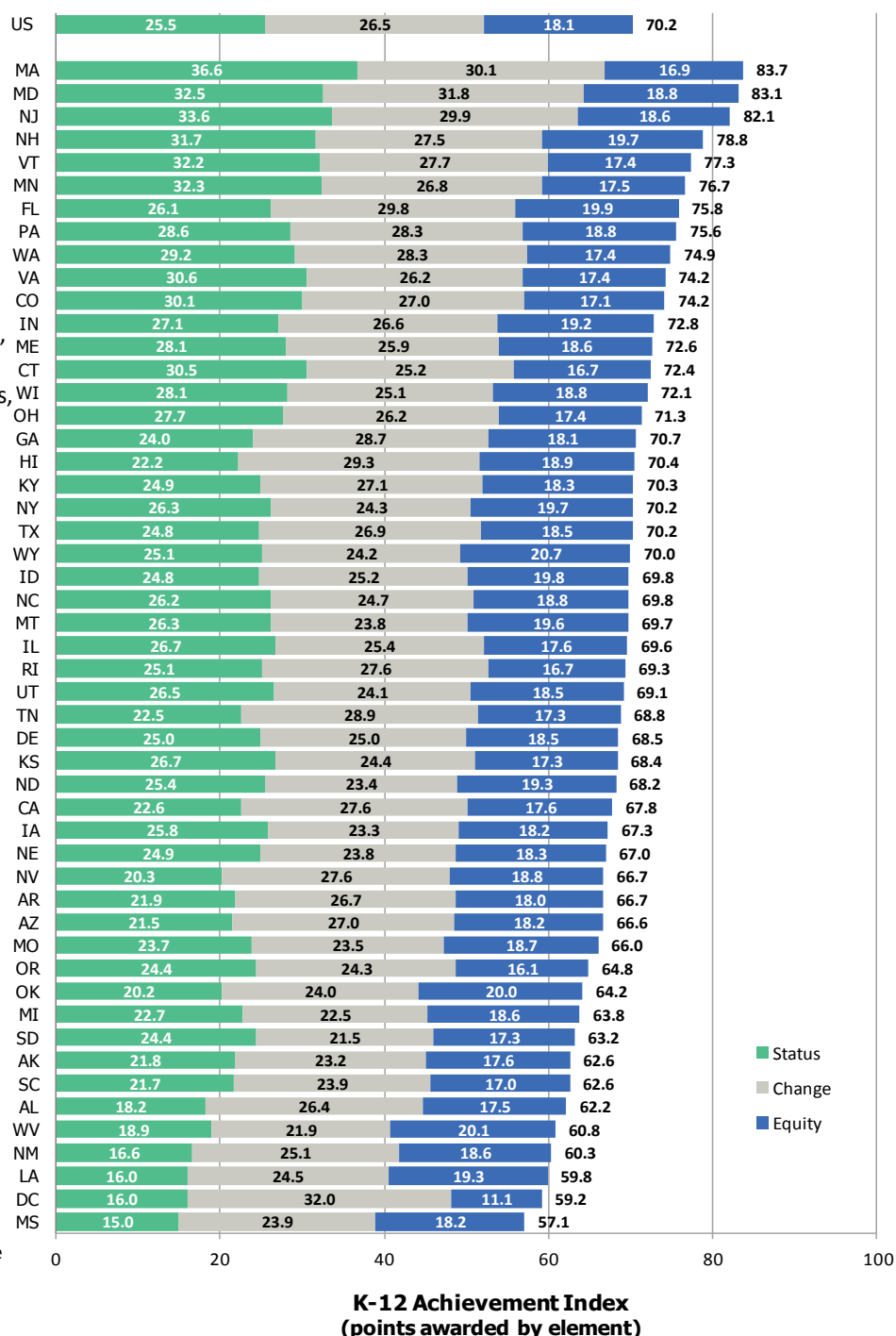
From <i>Quality Counts 2014</i>	Massachusetts		National Average
	State Average	Rank	
Achievement Levels			
4th grade math – Percent proficient on NAEP (2013)	58.4%	3	41.3%
8th grade math – Percent proficient on NAEP (2013)	54.6%	1	34.4%
4th grade reading – Percent proficient on NAEP (2013)	47.5%	1	34.0%
8th grade reading – Percent proficient on NAEP (2013)	48.2%	1	34.3%
Achievement Gains			
4th grade math – Scale-score change on NAEP (2003-2013)	+11.4	9	+7.2
8th grade math – Scale-score change on NAEP (2003-2013)	+14.0	4	+7.5
4th grade reading – Scale-score change on NAEP (2003-2013)	+4.8	17	+4.2
8th grade reading – Scale-score change on NAEP (2003-2013)	+4.1	22	+4.7
Poverty Gap (National School Lunch Program, noneligible minus eligible)			
Reading gap – 4th grade NAEP scale score (2013)	31.4	44	28.6
Math gap – 8th grade NAEP scale score (2013)	32.1	49	27.2
Reading-gap change – 4th grade NAEP (2003-2013), negative value = closing gap	+5.0	41	+0.7
Math-gap change – 8th grade NAEP (2003-2013), negative value = closing gap	-1.6	16	-1.2
Achieving Excellence			
Math excellence – Percent advanced on 8th grade NAEP (2013)	18.2%	1	8.3%
Change in math excellence – Percent advanced on NAEP (2003-2013)	+9.9%	1	+3.4%
High School Graduation			
Graduation rate – Public schools (class of 2010)	79.9%	14	74.7%
Change in graduation rate – Public schools (2000-2010)	+4.7%	34	+7.9%
Advanced Placement			
High AP test scores – Scores of 3 or higher per 100 students (2012)	34.1	6	25.7
Change in AP Scores – Change in high scores per 100 students (2000-2012)	+21.4	6	+16.6
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 nonpoor students (equity).

The nation as a whole earns 70.2 points, on a 100-point scale, for a grade of C-minus. The leading state, Massachusetts, earns 83.7 points and a B, while Mississippi finishes last with a score of 57.1.

Massachusetts is the only state to earn an A in the status category, while Maryland and New Jersey show grades of C+ or better across the three achievement dimensions.



SCHOOL FINANCE ANALYSIS

Equity and Spending Indicators

From <i>Quality Counts 2015</i>	Massachusetts		National
	State Average	Rank	Average
Equity (2012)			
Wealth-Neutrality Score – Relationship between district funding and local property wealth	0.148	28	0.139
McLoone Index – Actual spending as percent of amount needed to bring all students to median level	91.0%	22	90.8%
Coefficient of Variation – Amount of disparity in spending across districts within a state	0.182	36	0.167
Restricted Range – Difference in per-pupil spending levels at the 95th and 5th percentiles	\$6,717	44	\$4,559
Spending (2012)			
Adjusted per-pupil expenditures (PPE) – Analysis accounts for regional cost differences	\$13,157	17	\$11,735
Students funded at or above national average – Percent of students in districts with PPE at or above U.S. average	99.9%	10	43.4%
Spending Index – Per-pupil spending levels weighted by the degree to which districts meet or approach the national average for expenditures	100.0	10	89.4
Spending on education – State expenditures on K-12 schooling as a percent of state taxable resources	3.4%	25	3.4%
	GRADE	B	10
			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 2015

This year's 19th edition of *Quality Counts* examines how new academic demands and accountability pressures are altering the learning environment for young children and the educators serving them. The print edition of *Quality Counts 2015* provides a 50-state update on results in two distinct areas: Chance for Success 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. Information is drawn from the 2014 and 2015 editions of *Quality Counts*. Reports for the 50 states and the District of Columbia are available on the Web at www.edweek.org/go/qc15.

How We Graded the States

The Chance-for-Success Index, Early Education Index, 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/qc15 (2015) and www.edweek.org/go/qc14 (2014).

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 (2015)

Elementary Reading and Middle School Mathematics: 2013 State NAEP assessment. U.S. Department of Education, 2013.

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, 2013.

K-12 Achievement (2014)

Reading and Mathematics Achievement: 2013 State NAEP assessment. U.S. Department of Education, 2013.

High School Graduation: Cumulative Promotion Index, calculated using the U.S. Department of Education's Common Core of Data, 2009-10. Education Week Research Center, 2013.

Advanced Placement: Education Week Research Center analysis of data from the College Board's AP Summary Reports 2012, and the U.S. Department of Education's Common Core of Data, 2011.

School Finance Analysis (2015)

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 2012; U.S. Department of Education's Common Core of Data 2010-11 and 2011-12 (district-level data); NCES' Comparable Wage Index 2012, as updated by Lori Taylor of Texas A&M University; U.S. Census Bureau's Small-Area Income and Poverty Estimates 2012; U.S. Department of Education's School District Demographics data, based on the 2008-12 American Community Survey; U.S. Census Bureau, Public Education Finances: 2012, May 2014; and 2012 gross-state-product data from the U.S. Department of Commerce's Bureau of Economic Analysis.

Early Education Index

The Education Week Research Center conducted an original analysis of participation in early-education, poverty-based gaps in enrollment, and trends over time. The center's Early Education Index features state grades based on federal data across those critical indicators. These indicators are not included in the states' summative grades.

Preschool Enrollment and Poverty Gap: Education Week Research Center analysis of data from the U.S. Census Bureau's American Community Survey 2011, 2012, and 2013.

Preschool Enrollment and Poverty-Gap Change: Education Week Research Center analysis of data from the U.S. Census Bureau's American Community Survey 2006 - 2008 and 2011 - 2013.

Head Start Enrollment: Education Week Research Center analysis of 2013 Head Start enrollment figures from the U.S. Department of Health and Human Services Administration for Children and Families; and the U.S. Census Bureau's American Community Survey, 2013.

Full-Day Preschool and Kindergarten: Education Week Research Center Analysis of data from the U.S. Bureau of Labor Statistics' Current Population Survey October Supplement, 2009-13.

Preparing to Launch Early Childhood's Academic Countdown

The 19th edition of *Quality Counts* examines the current landscape, policy debates, and research surrounding early-childhood education. The print edition of the report also provides a 50-state update of results in two of the areas monitored by the report on an ongoing basis: Chance for Success and school finance.

Highlights from this year's report

A comprehensive look at **early-childhood education**, 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

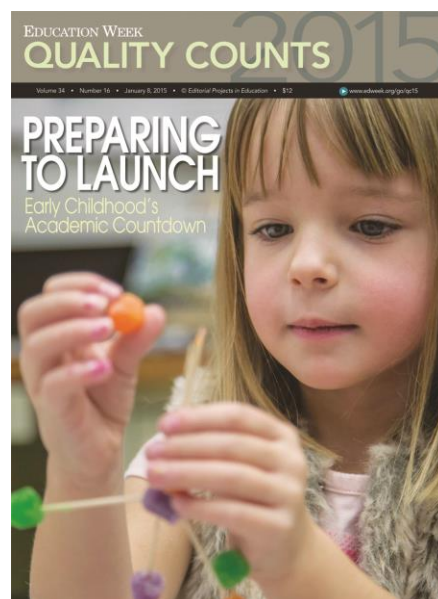
State of the States—Our comprehensive annual review of state performance, this year highlighting: Chance for Success and school finance

Online Extras

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