

MEASURING UP

2006

**THE STATE REPORT CARD
ON HIGHER EDUCATION**

MASSACHUSETTS



**THE NATIONAL CENTER FOR
PUBLIC POLICY AND
HIGHER EDUCATION**

WHAT IS MEASURING UP?

The purpose of this state report card is to provide the general public and policymakers with information they can use to assess and improve postsecondary education in each state. *Measuring Up 2006* is the fourth in a series of biennial report cards.

Measuring Up 2006 evaluates states on their performance in higher education because it is the states that are primarily responsible for educational access and quality in the United States. In this report card, “higher education” refers to all education and training beyond high school, including all public and private, two- and four-year, for-profit and nonprofit institutions.

The report card grades states in six overall performance categories:

- **Preparation:** How adequately does the state prepare students for education and training beyond high school?
- **Participation:** Do state residents have sufficient opportunities to enroll in education and training beyond high school?
- **Affordability:** How affordable is higher education for students and their families?
- **Completion:** Do students make progress toward and complete their certificates or degrees in a timely manner?
- **Benefits:** What benefits does the state receive from having a highly educated population?
- **Learning:** What is known about student learning as a result of education and training beyond high school?

Each state receives a letter grade in each performance category. Each grade is based on the state’s performance on several indicators, or quantitative measures, in that category.

Measuring Up 2006 is the first edition that includes data in the Learning category for all 50 states on the extent to which colleges and universities prepare students to contribute to the workforce.

As in *Measuring Up 2004*, most states in 2006 receive an “Incomplete” in Learning due to the lack of reported information.

This year, however, nine states (Illinois, Kentucky, Maryland, Massachusetts, Missouri, Nevada, New York, Oklahoma, and South Carolina) receive a “Plus.” For more information on these states and the Learning category, see page 12 of this state report card.

In four of the performance categories—Preparation, Participation, Completion, and Benefits—grades are calculated by comparing each state’s current performance to that of the best-performing states. This comparison provides a basis for evaluating each state’s performance within a national context and encourages each state to “measure up” to the highest-performing states.

In the Affordability category, however, the United States as a whole is “measuring down.” That is, even in the best-performing states, higher education has become *less* rather than *more* affordable when the costs of attending college are considered relative to family income. As a result, state grades in the Affordability category are calculated by comparing each state’s current performance with the performance of the best states in the early 1990s. This comparison allows policymakers to examine their state’s results relative to other states, while also encouraging improved performance over time. The Affordability category is the only one in which no state receives an A—the highest grade is a C–.

Measuring Up 2006 also compares each state’s current performance with its own performance in the early 1990s. Although this historical comparison is not graded, it is offered so that states can examine their trends in performance—both improvements and declines—over time. All data are drawn from reliable national sources. (For more information, please see the *Technical Guide for Measuring Up 2006* at www.highereducation.org.)

Measuring Up 2006 is the first edition that offers international comparisons that provide essential information on how well the United States and each of the 50 states are preparing residents with the knowledge and skills necessary to compete effectively in a global economy. Every state is compared with nations associated with the Organisation for Economic Co-operation and Development (OECD).

A Snapshot of Change Over Time

Academic preparation for college has continued to improve since the early 1990s, which is approximately when the most reliable data became available for meaningful comparisons. High school graduates are, in general, better prepared for college today than their peers were about a decade ago, as indicated by a greater proportion of high school students enrolled in a college-preparatory curriculum and scoring higher on national assessment examinations. Most states, however, and the United States as a whole, continue to show little progress in translating these gains into improvements at the college level.

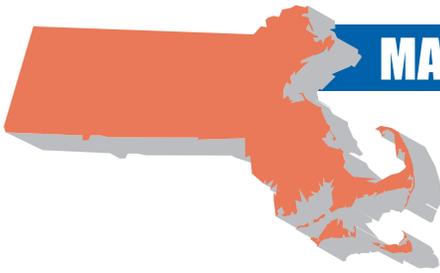
Preparation: 45 states improved on more than half of the indicators; 5 improved on some of the indicators.

Participation: 8 states improved on more than half of the indicators; 28 improved on some of the indicators; 14 declined on most or all of the indicators.

Affordability: 1 state improved on more than half of the indicators; 32 improved on some of the indicators; 17 declined on most or all of the indicators.

Completion: 35 states improved on more than half of the indicators; 13 improved on some of the indicators; 2 declined on most or all of the indicators.

Benefits: 40 states improved on more than half of the indicators; 8 improved on some of the indicators; 2 declined on most or all of the indicators.



MASSACHUSETTS

Massachusetts compares very well with other states in preparing students for and enrolling them in college. However, the state's current strong performance in higher education could be undermined by substantial disparities in opportunity based on ethnicity and income, and some of these disparities have widened over the past decade. The proportion of 9th graders graduating from high school within four years has dropped since the early 1990s. During the same period, colleges and universities in Massachusetts have become less affordable for students and their families. If these trends are not addressed, they could limit the state's access to a competitive workforce and weaken its economy over time.

■ Massachusetts is a top-performing state in the proportions of 11th and 12th graders who take and score well on Advanced Placement tests and college entrance exams.

Strengths

Preparation

■ Eighth graders are well prepared to succeed in challenging high school courses. They perform very well on national assessments in math, science, reading, and writing. Massachusetts is the top-performing state in math and reading, and among the top-performing states in science and writing.

■ Over the past 13 years, the percentage of 8th graders performing well on national math assessments has increased substantially. Massachusetts has consistently performed very well on science, reading, and writing assessments.

■ Low-income 8th graders score very well on national math assessments, making the state a top performer on this measure as well.



What do the arrows mean?

↑ The state has improved on more than half of the indicators in the category.

↔ The state has improved on some, but no more than half, of the indicators in the category.

↓ The state has declined on most or all indicators.

Participation

■ The chance that a 9th grader will enroll in college within four years is very high and has increased over the past decade. Although a smaller percentage of students graduate from high school within four years, more of those who do graduate enroll in college.

Completion

■ Compared with other states, a large proportion of first-year students at community colleges return for their second year. However, this proportion has declined substantially over the past 15 years.

■ Massachusetts has consistently seen a very high percentage of freshmen at four-year colleges and universities return for their sophomore year.

■ A very high proportion of students complete certificates and degrees relative to the number enrolled.

Benefits

■ Massachusetts has consistently performed very well on the percentage of residents who have a bachelor's degree, and this substantially strengthens the state economy.

Weaknesses

Participation

■ The percentage of working-age adults enrolled part-time in education or training beyond high school has declined by 24%, compared with a nationwide decline of 12%.

■ Among young adults (ages 18-24), the gap in college participation between whites and non-whites is substantial. In addition, young adults from high-income families are about twice as likely as those from low-income families to attend college.

Affordability

■ Net college costs for low- and middle-income students to attend community colleges represent 38% of their annual family income. (Net college costs equal tuition, room, and board after financial aid.) For these students at public four-year colleges and universities, net college costs represent about one-half of their annual family income. These two sectors enroll 50% of college students in the state.

■ The state makes a very low investment in need-based financial aid compared with leading states, despite increasing this investment since 1992.

Benefits

■ Over the past 12 years, the gap between whites and non-whites has widened in the percentage who have a bachelor's degree.

2006
Grade

Change
Over Time



Massachusetts has improved on its already excellent performance in preparing students to succeed in college. This year Massachusetts receives an A in preparation.

Graded Information

Compared with other states:

- Eighth graders perform very well on national assessments in math, science, reading, and writing, indicating that they are well prepared to succeed in challenging high school courses. Massachusetts is the top-performing state in math and reading, and among the top-performing states in science and writing.

- Low-income 8th graders perform very well on national assessments in math. Massachusetts is among the top-performing states on this measure.

- Massachusetts is among the top performers in the proportions of 11th and 12th graders scoring well on Advanced Placement tests and college entrance exams.

- About three-quarters of secondary school students are taught by qualified teachers, which compares very well with top-performing states.

Change in Graded Measures

- Over the past 12 years, Massachusetts has consistently performed very well on the proportion of high school students enrolled in upper-level math.

- The percentage of 8th graders performing well on national assessments in math has increased substantially over the past 13 years.

PREPARATION	MASSACHUSETTS		Top States 2006
	1992*	2006	
High School Completion (20%)			
18- to 24-year-olds with a high school credential	90%	91% [†]	94%
K-12 Course Taking (35%)			
9th to 12th graders taking at least one upper-level math course	n/a	59% [‡]	64%
9th to 12th graders taking at least one upper-level science course	n/a	38% [‡]	40%
8th grade students taking algebra	n/a	35% [‡]	35%
12th graders taking at least one upper-level math course	n/a	66% [‡]	66%
K-12 Student Achievement (35%)			
8th graders scoring at or above "proficient" on the national assessment exam:			
in math	23%	43%	38%
in reading	36%	44%	38%
in science	37%	41%	41%
in writing	31%	42%	41%
Low-income 8th graders scoring at or above "proficient" on the national assessment exam in math	7%	22%	22%
Number of scores in the top 20% nationally on SAT/ACT college entrance exam per 1,000 high school graduates	138	253	237
Number of scores that are 3 or higher on an Advanced Placement subject test per 1,000 high school juniors and seniors	103	210	217
Teacher Quality (10%)			
7th to 12th graders taught by teachers with a major in their subject	65%	77%	81%

*The indicators report data beginning in 1992 or the closest year for which reliable data are available. See the *Technical Guide for Measuring Up 2006*.

[†]Eighty-eight percent of 18-24-year-olds have a regular high school diploma; 4% have a GED.. The numbers shown for a regular high school diploma and a GED may not exactly equal the number for a high school credential due to rounding.

[‡]Data from *Measuring Up 2004* were used because updated state information was not available.

■ During the past nine years, the state has consistently performed very well on national assessments in science.

■ The percentage of 8th graders performing well on national assessments in reading has increased by 22% over the past seven years, in contrast to a national decline of 7%. The state has consistently performed very well on this measure.

■ In addition, the percentage of 8th graders performing well on national assessments in writing has increased. The state has consistently performed very well on this measure.

■ The percentage of low-income 8th graders performing well on national assessments in math has more than tripled over the past nine years.

■ Over the past 12 years, the proportions of 11th and 12th graders taking and scoring well on college entrance exams have increased substantially.

Other Key Facts

■ About 13% of children under age 18 live in poverty, compared with a national rate of 18%.

■ Policymakers and state residents do not have access to important information about the courses students take in high school or about 8th graders taking algebra because the state declined to participate in the national survey.

The preparation category measures how well a state's K–12 schools prepare students for education and training beyond high school. The opportunities that residents have to enroll in and benefit from higher education depend heavily on the performance of their state's K–12 educational system.

2006
Grade

Change
Over Time



Despite a decline in performance, Massachusetts continues to excel in enrolling students in higher education. This year Massachusetts receives an A in participation.

Graded Information

Compared with other states:

- The chance of Massachusetts high school students enrolling in college by age 19 is very high.

- Only a fair percentage of working-age adults (ages 25 to 49) are enrolled part-time in college-level education or training.

Change in Graded Measures

Over the past decade:

- The chance of enrolling in college by age 19 has increased by 4%, in contrast to a nationwide decline of 2%. Although a smaller percentage of students graduate from high school within four years, more of those who graduate enroll in college.

- The percentage of working-age adults who are enrolled part-time in education or training beyond high school has declined by 24%, compared with a nationwide decline of 12%.

Other Key Facts

- Among the young adult population (ages 18 to 24), the gap in college participation between whites and other ethnic groups is substantial. Currently, 39 out of 100 white young adults are enrolled in college, compared to 28 out of 100 young adults from other ethnic groups.

PARTICIPATION	MASSACHUSETTS		Top States 2006
	1992*	2006	
Young Adults (60%)			
Chance for college by age 19	47%	48%	53%
18- to 24-year-olds enrolled in college	36%	36%	41%
Working-Age Adults (40%)			
25- to 49-year-olds enrolled part-time in any type of postsecondary education	5.1%	3.9%	5.1%

*The indicators report data beginning in 1992 or the closest year for which reliable data are available. See the *Technical Guide for Measuring Up 2006*.

- Young adults (ages 18 to 24) from high-income families are about twice as likely as those from low-income families to attend college.

- The state's population is projected to grow by 5% from 2005 to 2020, below the national rate of 14%. During approximately the same period, the number of high school graduates is projected to increase by 1%.

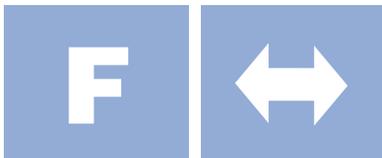
- About 13% of the adult population has less than a high school diploma or its equivalent, compared with 14% of adults nationwide.

- In Massachusetts, 8,925 more students are entering the state than are leaving to attend college. About 29% of Massachusetts high school graduates who go to college attend college out of state.

The participation category addresses the opportunities for state residents to enroll in higher education. A strong grade in participation generally indicates that state residents have high individual expectations for education and that the state provides enough spaces and types of educational programs for its residents.

2006
Grade

Change
Over Time



Massachusetts has made no notable progress in providing affordable higher education. This year Massachusetts is one of many states to receive an F in affordability.

Graded Information

■ Compared with best-performing states, families in Massachusetts devote a large share of family income, even after financial aid, to attend public two-year colleges, and they devote a very large share of family income to attend public and private four-year colleges and universities in the state.

■ The state's investment in need-based financial aid is very low when compared with top-performing states, and Massachusetts does not offer low-priced college opportunities.

■ Undergraduate students borrowed on average \$4,342 in 2005.

Change in Graded Measures

■ Over the past several years, the share of family income, even after financial aid, needed to pay for college expenses at public four-year institutions has increased from 28% to 34%.

■ During the same period, the state has increased its commitment to financially needy students. Nonetheless, the share of family income, even after financial aid, needed to pay for college is large when compared with other states.

AFFORDABILITY	MASSACHUSETTS		Top States In Early 1990s
	1992*	2006	
Family Ability to Pay (50%)			
Percent of income (average of all income groups) needed to pay for college expenses minus financial aid:			
at community colleges	24%	25%	15%
at public 4-year colleges/universities	28%	34%	16%
at private 4-year colleges/universities	72%	83%	32%
Strategies for Affordability (40%)			
State investment in need-based financial aid as compared to the federal investment	38%	51%	89%
At lowest-priced colleges, the share of income that the poorest families need to pay for tuition	25%	22%	7%
Reliance on Loans (10%)			
Average loan amount that undergraduate students borrow each year	\$3,454	\$4,342	\$2,619

*The indicators report data beginning in 1992 or the closest year for which reliable data are available. See the *Technical Guide for Measuring Up 2006*.

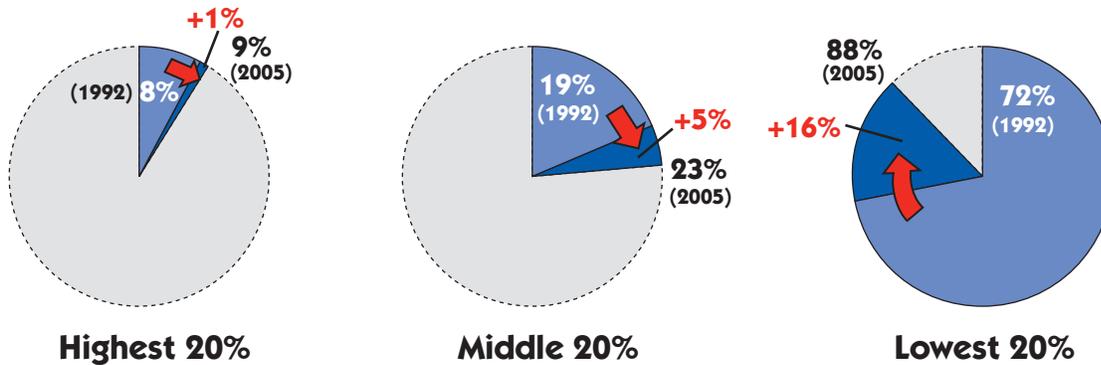
Note: In the affordability category, the lower the figures the better the performance for all indicators except for "State investment in need-based financial aid."

Other Key Facts

■ In Massachusetts, 26% of students are enrolled in community colleges, 24% in public four-year colleges and universities, and 48% in private four-year institutions.

The affordability category measures whether students and families can afford to pay for higher education, given income levels, financial aid, and the types of colleges and universities in the state.

College in Massachusetts Has Become Less Affordable, Particularly for Low-Income Families (1992–2005)



Net costs to attend public 4-year colleges as a share of income for different income families.

Financial Burden to Pay for College Varies Widely Among Different Income Families in the State

Those who are striving to reach or stay in the middle class—the 40% of the population with the lowest incomes—earn on average \$23,695 each year.

■ If a student from such a family were to attend a community college in the state, their net cost to attend college would represent about 38% of their income annually:

Tuition, room, and board: \$9,726
 Financial aid received: -\$ 833
 Net college cost: \$8,893
 Percent of income: 38%

■ If the same student were to attend a public four-year college in the state, their net cost to attend college would represent about 52% of their income annually:

Tuition, room, and board: \$14,105
 Financial aid received: -\$ 1,858
 Net college cost: \$12,247
 Percent of income: 52%

Note

The numbers shown for tuition, room, and board minus financial aid may not exactly equal net college cost due to rounding.

A CLOSER LOOK AT FAMILY ABILITY TO PAY	Average family income	Community colleges		Public 4-year colleges/universities		Private 4-year colleges/universities	
		Net college cost*	Percent of income needed to pay net college cost	Net college cost*	Percent of income needed to pay net college cost	Net college cost*	Percent of income needed to pay net college cost
Income groups used to calculate 2006 family ability to pay							
20% of the population with the lowest income	\$13,600	\$8,670	64%	\$11,911	88%	\$30,652	225%
20% of the population with lower-middle income	\$33,789	\$9,117	27%	\$12,583	37%	\$29,942	89%
20% of the population with middle income	\$58,050	\$9,512	16%	\$13,423	23%	\$29,008	50%
20% of the population with upper-middle income	\$90,506	\$9,637	11%	\$13,629	15%	\$28,861	32%
20% of the population with the highest income	\$152,884	\$9,665	6%	\$13,704	9%	\$29,595	19%
40% of the population with the lowest income	\$23,695	\$8,893	38%	\$12,247	52%	\$30,297	128%

*Net college cost equals tuition, room, and board, minus financial aid.

2006
Grade

Change
Over Time



Massachusetts has made notable gains in the proportion of students earning a certificate or degree in a timely manner. Massachusetts receives an A in completion this year.

Graded Information

Compared with other states:

- A large percentage (53%) of first-year students in community colleges return for their second year.
- Massachusetts remains a top-performing state in the percentage of freshmen at public and private four-year colleges and universities returning for their sophomore year (83%).
- The state is also the top performer in the percentage of first-time, full-time college students who complete a bachelor's degree within six years of enrolling in college (67%).
- In addition, a very large proportion of students complete certificates and degrees relative to the number enrolled.

Change in Graded Measures

- Over the past 15 years, the percentage of first-year community college students returning for their second year has declined substantially.

COMPLETION	MASSACHUSETTS		Top States 2006
	1992*	2006	
Persistence (20%)[†]			
1st year community college students returning their second year	59%	53%	62%
Freshmen at 4-year colleges/universities returning their sophomore year	83%	83%	82%
Completion (80%)			
First-time, full-time students completing a bachelor's degree within 6 years of college entrance	64%	67%	64%
Certificates, degrees, and diplomas awarded at all colleges and universities per 100 undergraduate students	16	18	20

*The indicators report data beginning in 1992 or the closest year for which reliable data are available.

[†]2006 data may not be entirely comparable with data from previous years.

See the *Technical Guide for Measuring Up 2006*.

- During the same period, however, Massachusetts has consistently had a very high percentage of freshmen at four-year colleges and universities returning for their sophomore year.

- The state has also consistently performed very well over the past seven years on the percentage of first-time, full-time college students earning a bachelor's degree within six years of enrolling in college.

The completion category addresses whether students continue through their educational programs and earn certificates or degrees in a timely manner. Certificates and degrees from one- and two-year programs as well as the bachelor's degree are included.

2006
Grade

Change
Over Time



Massachusetts has seen an increase in the benefits the state receives from having a more highly educated population. Massachusetts earns an A in benefits this year.

Graded Information

Compared with other states:

■ A very high proportion of residents have a bachelor's degree, and this substantially strengthens the state economy, making Massachusetts a top performer on both of these measures.

■ In addition, residents contribute substantially to the civic good, as measured by charitable giving, volunteerism, and voting.

Change in Graded Measures

■ Over the past 12 years, Massachusetts has consistently performed very well on the percentage of residents who have a bachelor's degree.

Other Key Facts

■ If all ethnic groups had the same educational attainment and earnings as whites, total personal income in the state would be about \$3.5 billion higher.

■ Over the past 12 years, the gap has widened in Massachusetts between whites and other ethnic groups in the percentage who have a bachelor's degree. Currently, 44 out of 100 white adults have a bachelor's degree, compared to 25 out of 100 adults from other ethnic groups.

BENEFITS	MASSACHUSETTS		Top States 2006
	1992*	2006	
Educational Achievement (37.5%)			
Population aged 25 to 65 with a bachelor's degree or higher	33%	41%	37%
Economic Benefits (31.25%)			
Increase in total personal income as a result of the percentage of the population holding a bachelor's degree	10%	12%	12%
Increase in total personal income as a result of the percentage of the population with some college (including an associate's degree), but not a bachelor's degree	2%	1%	3%
Civic Benefits (31.25%)			
Residents voting in national elections	62%	56%	64%
Of those who itemize on federal income taxes, the percentage declaring charitable gifts	93%	91%	91%
Increase in volunteering rate as a result of college education	n/a	22%	22%
Adult Skill Levels (0%)*			
Adults demonstrating high-level literacy skills:			
quantitative	26%	30%	33%
prose	24%	29%	33%
document	22%	26%	28%

*The indicators report data beginning in 1992 or the closest year for which reliable data are available. See the *Technical Guide for Measuring Up 2006*.

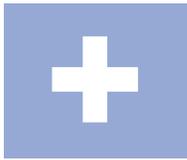
†These are estimates from *Measuring Up 2004* and are not used to calculate grades. New data will be available in fall 2006.

■ In 2002, Massachusetts scored 90 on the New Economy Index, compared to a nationwide score of 60. The New Economy Index, developed by the Progressive Policy

Institute, measures the extent to which states are participating in knowledge-based industries.

The benefits category measures the economic and societal benefits that the state receives as the result of having well educated residents.

2006
Grade



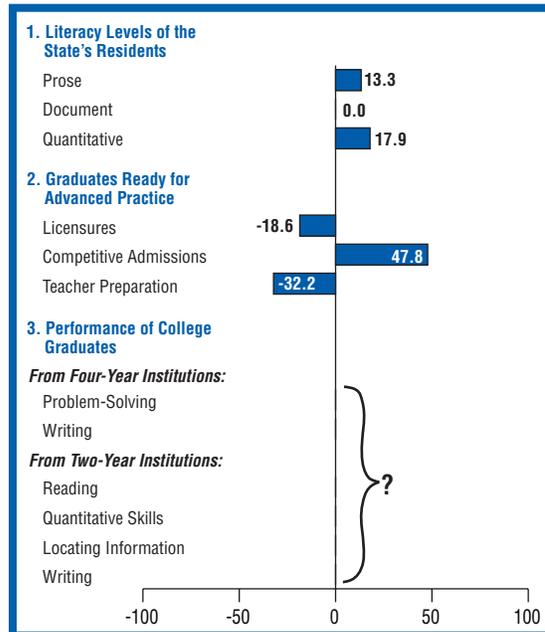
Massachusetts is among nine states that receive a “Plus” in Learning because data were sufficient to compare at least two of the three Learning categories in the state results described below.

In *Measuring Up 2006*, data are available, for the first time, for all fifty states on “Graduates Ready for Advanced Practice” indicators (see chart). In the 2004 edition of *Measuring Up*, state-level results on all Learning indicators were reported for five states (Illinois, Kentucky, Nevada, Oklahoma, and South Carolina) that participated in a pilot project directed by the National Forum on College-Level Learning and funded by the Pew Charitable Trusts.* This project evaluated state performance in Learning on three topics:

1. Literacy Levels of the State’s Residents. These indicators answer the question, “What are the abilities of the state’s college-educated population?” The answer provides information about the level of “educational capital” the state can count on to develop a competitive 21st-century workforce and a responsible citizenry.

2. Graduates Ready for Advanced Practice. These indicators address the question, “To what extent do colleges and universities in the state educate students to contribute to the workforce?” These measures examine how well prepared state college and university graduates are to enter a licensed profession or participate in graduate study.

3. Performance of College Graduates. These indicators address the question, “How effectively can college and university graduates in the state communicate and solve problems?” The ability of college graduates to perform complex academic and real-world tasks is the “bottom line” in Learning. This can only be determined by common direct assessments of college graduate abilities.



Note: Measures under the third cluster will require special data collection efforts similar to those undertaken by the five pilot project states in 2004.

Measuring Up 2006 employs the same methodology for Learning as used in the 2004 edition of *Measuring Up*. Overall state performance is illustrated by a bar chart for each state. In the chart, the data for each indicator are represented by a bar showing the number of percentage points the state performed above or below the national average.

The overall picture for *Measuring Up 2006* remains incomplete. While “Graduates Ready for Advanced Practice” results can be reported for all states, results for “Literacy Levels of State’s Residents” can only be calculated for five of the six states that participated in a state-level version of the National Assessment of Adult Literacy (SAAL) conducted in 2003. Results for “Performance of College Graduates”, reported in the 2004 edition of *Measuring Up*, were based on assessments administered to representative samples of college students in each of the five pilot project states. These measures were not updated for 2006.

Massachusetts Results

Massachusetts is the top-performing state of the five participating in the SAAL study with respect to the literacy of its adult population. The state ranks more than 13 percentage points above the national benchmark in the proportion of its college-educated citizens who are proficient in prose literacy: 34% of Massachusetts’ college-educated citizens are proficient compared with 30% nationally. The state performs even better in quantitative literacy: 33% of its college-educated citizens are proficient compared with 28% nationally. The state’s performance on document literacy matches the national average: 24% of Massachusetts’ college-educated citizens are proficient in this area.

Massachusetts is about 18% below the national benchmark in workforce preparation as reflected in professional licensure examinations. About 20% fewer Massachusetts graduates take such examinations than is the case nationally, and their pass rate matches the national average. In contrast, Massachusetts is more than 45% above the national benchmark in preparing students for graduate study as reflected in graduate admissions examinations, making it the top state on this measure. About 5% more Massachusetts graduates take such examinations than is typical nationally, but the proportion earning competitive scores is more than 20% above the national average. Finally, Massachusetts is more than 30% below the national benchmark with respect to pass rates on the state’s teacher examinations.

*More information on the National Forum on College-Level Learning can be obtained at http://www.highereducation.org/reports/mu_learning/index.shtml.

How Massachusetts Measures Up Internationally

Participation*

■ About 46% of young adults, ages 18 to 24, in Massachusetts are currently enrolled in college. Internationally, Massachusetts compares very well with top countries, and is surpassed only by Korea, the best-performing nation on this measure.

Completion

■ When compared internationally, Massachusetts is surpassed by many countries in the proportion of students who complete certificates or degrees. With 18 out of 100 students enrolled completing a degree or certificate, Massachusetts' completion rate is only 76% of the rate in the United Kingdom, the top-performing country on this measure, where 24 out of 100 students complete certificates or degrees. Massachusetts also lags Japan, Portugal, Australia, Switzerland, Denmark, Ireland, New Zealand, France, and Iceland (see figure 1).

Educational Level of Adult Population

■ Internationally, Massachusetts is surpassed by top countries in the educational attainment of younger adults, ages 25 to 34. About 49% of younger adults in Massachusetts attain a college degree. The state's educational attainment rate, however, is 94% of the rate in Japan, the best-performing country on this measure. Massachusetts is also surpassed by Canada (see figures 2 and 3).

Figure 1. Total Degrees/Certificates Awarded Per 100 Students Enrolled, 2004

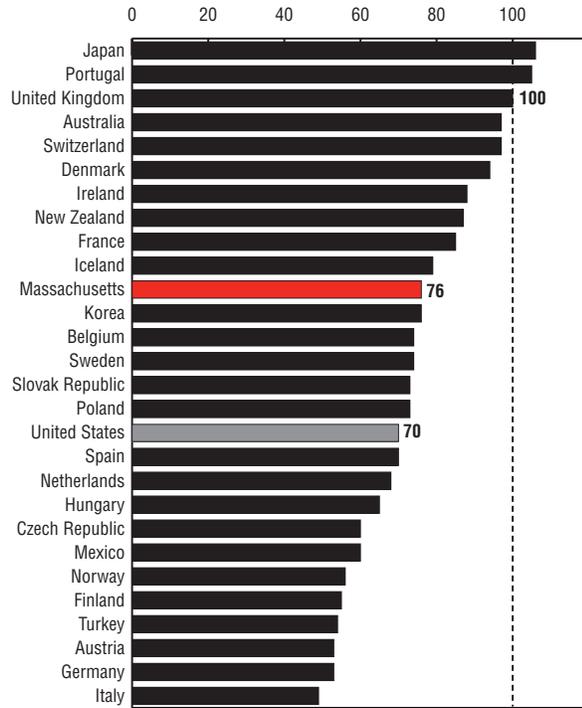


Figure 2. Percent of Older Adults (Ages 35-64) with an Associate's Degree or Higher, 2004

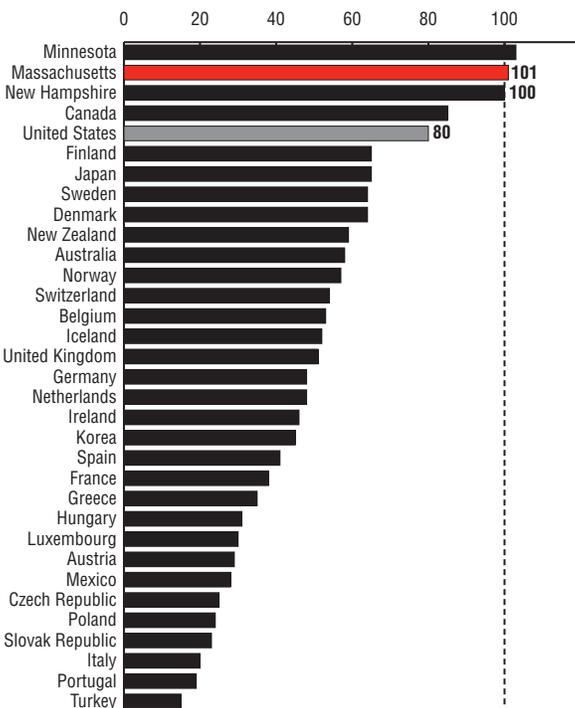
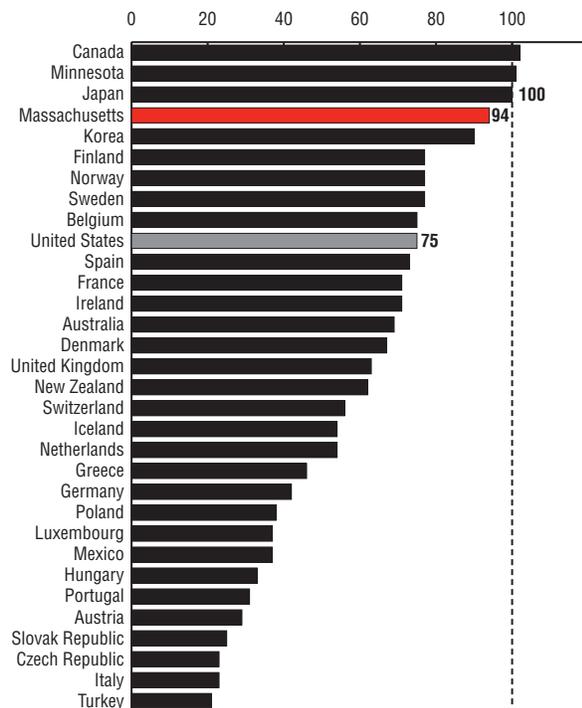


Figure 3. Percent of Younger Adults (Ages 25-34) with an Associate's Degree or Higher, 2004

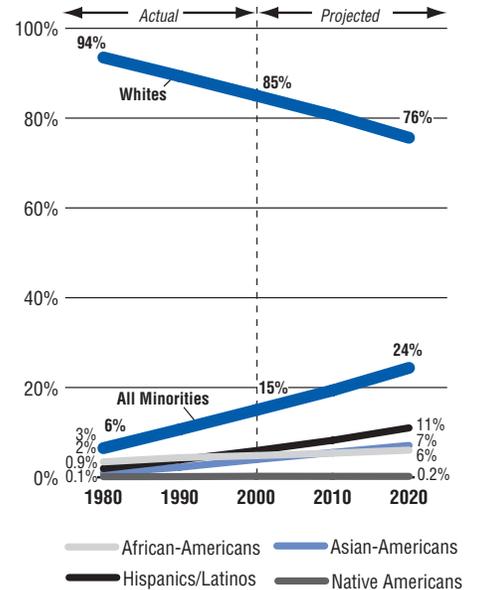


*This measure includes both undergraduate and graduate enrollment, whereas the similar indicator in the graded category only reports undergraduate enrollment.

Note: The charts show index scores, as measured against the top performance. The top performance, defined as the median value of the top five performers, receives a score of 100. The top performer can be a nation or a U.S. state. For more international comparison information, go to www.highereducation.org.

State Context	Massachusetts	State Rank
Population (2005)	6,398,743	13
Gross state product (2004, in millions)	\$312,700	13
Leading Indicators	Massachusetts	U.S.
Projected % change in population, 2005-2020	5%	14%
Projected % change in number of all high school graduates, 2002-2017	1%	8%
Projected budget surplus/shortfall by 2013	-2%	-6%
Average income of poorest 20% of population (2004)	\$13,600	\$12,168
Children in poverty (2004)	13%	18%
Percent of adult population with less than a high school diploma or equivalent (2004)	13%	14%
New economy index (2002)*	90	60
Facts and Figures	Massachusetts	
	Number/Amount	Percent
Institutions of Postsecondary Education (2004-05)		
Public 4-year	15	
Public 2-year	16	
Private 4-year	82	
Private 2-year	9	
Students Enrolled by Institution Type (2004)		
Public 4-year	79,130	24%
Public 2-year	85,488	26%
Private 4-year	159,236	48%
Private 2-year	4,481	1%
Students Enrolled by Level (2004)		
Undergraduate	328,335	75%
Graduate	94,819	22%
Professional	16,091	4%
Enrollment Status of Students (2004)		
Full-time	299,430	68%
Part-time	139,815	32%
Net Migration of Students (2004)		
Positive numbers for net migration mean that more students are entering than leaving the state to attend college. Negative numbers reveal the reverse.	8,925	
Average Tuition (2005-06)		
Public 4-year institutions	\$7,307	
Public 2-year institutions	\$2,927	
Private 4-year institutions	\$27,381	
State and Local Appropriations for Higher Education		
Per \$1,000 of personal income, FY 2006	\$3	
Per capita, FY 2006	\$143	
% change, FY 1996-2006		19%

Working-Age Population (ages 25-64) by Race/Ethnicity, 1980-2020



Racial and Ethnic Gaps in Educational Levels of Working-Age Population (ages 25-64), 2000

	Whites	African-Americans	Hispanics/Latinos
Less than a high school credential	8%	20%	41%
Associate's degree or higher	48%	30%	19%

* This index, created by the Progressive Policy Institute, measures the extent to which a state is participating in knowledge-based industries. A higher score means increased participation.

Note: Percentages might not add to 100 due to rounding.

QUESTIONS & ANSWERS

Q: What is being graded in this report card, and why?

A: *Measuring Up 2006* grades states, not individual colleges or universities, on their performance in higher education. The states are responsible for preparing students for higher education by means of sound K–12 school systems, and they provide most of the public financial support—\$72 billion currently—for colleges and universities. Through their oversight of public colleges and universities, state leaders affect the types and number of programs available in the state. State leaders also determine the limits of financial support and often influence tuition and fees for public colleges and universities. They establish how much state-based financial aid is available to students and their families, which affects students attending both private and public colleges and universities.

Q: How are states graded?

A: *Measuring Up 2006* grades states in six performance categories: Preparation, Participation, Affordability, Completion, Benefits, and Learning. Each category is made up of several indicators, or quantitative measures—a total of 35 in the first five categories. Grades are calculated based on each state's performance on these indicators, relative to the best-performing states. As in earlier editions, state data are drawn from the most recent public information available, and the grades in *Measuring Up 2006* reflect state performance in 2004 or 2005.

In the Affordability category, *Measuring Up 2006* reflects the major changes in tuition and financial aid that occurred in 2005. In addition, each state's performance is calculated relative to the performance of top states in the early 1990s—rather than relative to the current performance of top states, as is the case with other graded categories. This difference in comparison, first introduced in *Measuring Up 2004*, creates a more stable basis for states to assess their performance in Affordability, which is the most volatile of the graded categories.

Measuring Up 2006 is the first edition that includes data in the Learning category for all 50 states on the extent to which colleges and universities prepare students to contribute to the workforce (see the "Graduates Ready for Advanced Practice" indicators). As in *Measuring Up 2004*, most states in 2006 receive an "Incomplete" in Learning due to the lack of reported information. This year, however, nine states receive a "Plus": Illinois, Kentucky, Maryland, Massachusetts, Missouri, Nevada, New York, Oklahoma, and South Carolina. These nine states reported adequate data in more than

one of the indicator groups either through their participation in a pilot project, or by collecting additional state data for the state version of the National Assessment of Adult Literacy (NAAL) conducted in 2003.

All data used to grade states in *Measuring Up 2006* were collected from reliable national sources, including the U.S. Census Bureau and the U.S. Department of Education. All data are the most current available for state comparisons, are in the public domain, and were collected in ways that allow meaningful comparisons among states. Please see the *Technical Guide for Measuring Up 2006* (available at www.highereducation.org) for more information regarding data sources used in *Measuring Up 2006*.

Q: What information is provided but not graded?

A: The state report cards highlight important gaps in college opportunities for various income and ethnic groups, and they identify improvements and setbacks in each state's performance over time. Each report card also presents important contextual information, such as demographic trends, student migration data, and state funding levels for higher education. International comparisons provide new contextual information for states.

Q: Why does *Measuring Up 2006* include international indicators?

A: *Measuring Up 2006* is the first edition to draw on international indicators, at both the state and national levels. In a global economy, it is critical for each nation to establish and maintain a competitive edge through the ongoing, high-quality education of its population. *Measuring Up 2006* provides essential information on how well the nation and each of the 50 states are preparing residents with the knowledge and skills necessary to compete effectively in the global economy. As with other data in *Measuring Up*, each international measure is based on the most current data available. In this case, the data are from the Organisation for Economic Co-operation and Development (OECD). International comparisons are used to gauge the states' and the nation's standing relative to OECD countries on the participation and educational attainment of their populations.

For more information on international comparisons, see *Measuring Up Internationally: Developing Skills and Knowledge for the Global Knowledge Economy* by Alan Wagner. For more information on available data sources, see the *Technical Guide for Measuring Up 2006* (available at www.highereducation.org).

STATE GRADES

	Preparation	Participation	Affordability	Completion	Benefits	Learning
Alabama	D-	C	F	B-	B	I
Alaska	B-	C+	F	F	B-	I
Arizona	D	B+	F	B	B+	I
Arkansas	D+	C	F	C	C	I
California	C	A	C-	B	A	I
Colorado	B+	A-	F	B	A-	I
Connecticut	A-	A-	F	B+	A	I
Delaware	C	B	F	A-	B-	I
Florida	C	C	F	A	B	I
Georgia	C+	D+	F	A	B-	I
Hawaii	C-	C	D	B-	A-	I
Idaho	C	D+	D	C+	C-	I
Illinois	B	A	F	B+	A	+
Indiana	C	C+	F	B+	C	I
Iowa	B+	A-	F	A	C	I
Kansas	B-	A	F	B+	B+	I
Kentucky	C-	B-	F	C+	C+	+
Louisiana	F	C-	F	C-	D+	I
Maine	B	B-	F	B	B-	I
Maryland	A-	A	F	B	A	+
Massachusetts	A	A	F	A	A	+
Michigan	C-	A-	F	B	A-	I
Minnesota	B	A	D	A	B+	I
Mississippi	D-	D	F	B	C	I
Missouri	C	B	F	B+	A	+
Montana	B+	C-	F	B-	C+	I
Nebraska	B	A	F	B+	B	I
Nevada	C-	C	F	F	C-	+
New Hampshire	B+	C+	F	A	A	I
New Jersey	A	A-	D	B	A	I
New Mexico	F	A	F	D	C	I
New York	A-	B-	F	A-	B+	+
North Carolina	B+	B-	F	B+	B	I
North Dakota	B-	A	F	B	C+	I
Ohio	B-	B-	F	B	B+	I
Oklahoma	D+	C+	F	C	B-	+
Oregon	C-	C+	F	B-	A	I
Pennsylvania	B	B	F	A	A-	I
Rhode Island	C+	A	F	A	B	I
South Carolina	C+	D+	F	B+	C	+
South Dakota	B	A	F	B+	C+	I
Tennessee	C-	C-	F	B	C+	I
Texas	B-	C+	F	C+	B-	I
Utah	A	B	C-	B	A-	I
Vermont	B-	C	F	A	A-	I
Virginia	A-	B	F	B+	A	I
Washington	B	C-	D-	A	A-	I
West Virginia	C-	C-	F	C+	D+	I
Wisconsin	B+	A-	F	A	B-	I
Wyoming	C-	B+	F	A	C-	I