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MEASURING UP 2006

THE NATIONAL REPORT CARD ON HIGHER EDUCATION

THE NATIONAL CENTER FOR
PUBLIC POLICY AND
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The National Center for Public Policy and Higher Education Board of Directors

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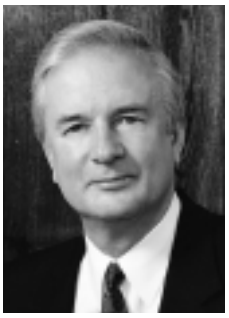
FOREWORD

By James B. Hunt Jr. and Garrey Carruthers



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Former Governor of North Carolina

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How well do the 50 states and the nation educate and train their citizens? Six years ago, we began to answer this question in *Measuring Up 2000*. Since then, the biennial *Measuring Up* series has become a widely accepted gauge of state and national higher education performance. *Measuring Up 2006*, the fourth report card, builds on earlier editions and adds an international perspective.

As did its predecessors, *Measuring Up 2006* compares and evaluates the performance of each state along critical dimensions of college opportunity and effectiveness to assess our national performance. From high school preparation through the bachelor's degree, the report card examines the contributions of public and private, two- and four-year, non-profit and for-profit colleges and universities. *Current performance* is measured by grades for each state, and *improvement* is shown by arrows pointing up, down, or sideways for each state and the nation. Our *Measuring Up* report cards and other National Center programs and activities encourage each state to improve on its own past performance by striving to emulate the performance of the leading states in each category—*preparing* young people for college, *enrolling* high school graduates and working adults in college-level education or training, in *completing* college degree and certificate programs, and *keeping college affordable* for students and families.

Measuring Up 2006, by introducing an international perspective to our understanding of higher education performance, underscores the imperative for improvement. Using the most reliable information available, the report card compares the performance of our states and nation with that of other nations. The results will surprise many Americans, especially those who have become comfortable with the conventional wisdom that our higher education is the "best in the world." Many of our individual colleges and universities do rank among the best anywhere, but other nations now surpass us in several key indicators of higher education performance, particularly on measures of accessibility and completion of degree and certificate programs. Generally, the United States is doing as well on these measures as it has in the recent past, but the nation has improved very little since the early 1990s. While our own progress stalled, much of the rest of the world has improved—educating more people to higher levels. Unevenness of performance across states led to this conclusion in *Measuring Up 2004*: "The inescapable fact is that the United States is underperforming in higher education." The international comparisons in this report card confirm this earlier conclusion.

Other nations' gains in college participation and degree attainment reflect their recent recognition of the enormous advantages that a college-educated population represents in the context of a knowledge-based economy and growing global competition. As the international indicators show, the United States must not remain satisfied with past achievements—with the proportions of Americans who enrolled and completed education and training during the 1990s. Any residual complacency from our years of world leadership is now an impediment to educational improvement and economic strength. We can and must mobilize our nation, our states, and our colleges for success in this external competition—as we did in the mid-20th century when the G.I.'s returned from Europe and Asia, and when the baby boomers came of college age. We can do it again.

It is time to recognize that American higher education, as it evolved in the 20th century was, for all its success, a way station, not a destination. In the 21st century, higher education must respond to an expanding, knowledge-based global marketplace. In responding, the results of past success—unparalleled facilities and faculties—can be a firm foundation, but only if the new context is clearly recognized. As in other important transitions, public policy leaders must lead, not simply oversee. Fortunately, several promising signs have appeared since we issued *Measuring Up 2004*: A summit meeting of the nation's governors recognized that every high school graduate must be ready to undertake college-level education or training. And the Secretary of Education's Commission on the Future of Higher Education will shortly make recommendations that address the major issues identified in this and earlier *Measuring Up* report cards.

Recognition of the new context is necessary but not sufficient. What is now needed is a sense of urgency among policy leaders, educators, and business leaders comparable to the policy emphasis that other countries are placing on higher education—as reflected in shifting international rankings. Solutions may be complex, responsibilities dispersed, and priorities upset, but the central issue can be stated simply: The current level of performance will fall short in a world being reshaped by the knowledge-based global economy. Our country and our states need to educate more people with college-level knowledge and skills.

INTRODUCTION:
International Comparisons Highlight Educational Gaps Between Young and Older Americans

By Patrick M. Callan

India

India's economy—the world's fourth largest—has grown rapidly over the past decade, reaching nearly 8% annual growth in recent years. This economic performance has been built, in part, on growth in technology-driven sectors, including software development, outsourced services, and, more recently, cross-border-contracted research and development (R & D). These sectors rely on a critical mass of educated and skilled workers, a large share of whom have facility in English. Disparities in income and living conditions are substantial, however, so that per capita annual income for the population as a whole is about $600.

Education and Research and Development have been identified as key policy targets, if the country is to build on rapid growth in knowledge-economy sectors. In the words of the prime minister, India is best positioned to "leapfrog in the race for social and economic development" by establishing a knowledge-oriented paradigm of development. A National Knowledge Commission was established in 2005 to recommend appropriate policies to boost research, technology transfer, and skill and knowledge development to strengthen India's competitive position in the global knowledge economy.

Higher education currently enrolls more than nine million students (about 10% of the relevant age group), with almost 20% of students in engineering and medicine. More than 300,000 students graduate each year with qualifications in science and engineering; of these graduates, according to one study, only about 100,000 are comparable to U.S. bachelor's degrees and another 100,000 are comparable to U.S. sub-bachelor's awards, such as associate's degrees. In both cases, the annual volume of graduates is similar to U.S. degree production in these fields. Further, India's elite science and technology institutes rank among the world's best, producing graduates who track into leading posts in national and multinational firms. Overall, however, graduate unemployment is high, at a time when the supply of graduates in some dynamic fields is judged insufficient to meet demand. Generally, the quality—and particularly the relevance—of study programs pursued by many students are judged to be weak. Targeted initiatives have been advanced to strengthen research and training in science and engineering, with funding and enrollment increases for leading institutes, and to broaden student learning, partly through new options for students to combine conventional studies with skills-oriented coursework, and new job-oriented diploma or certificate programs.

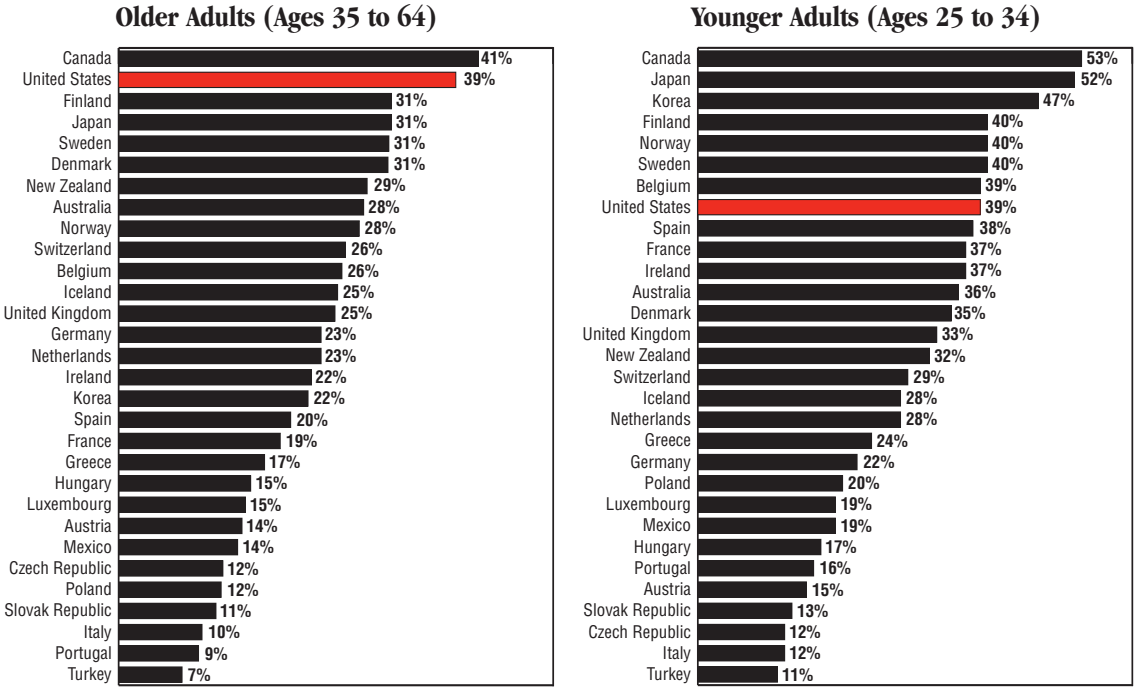
Measuring Up 2006 is the fourth national report card on higher education in the United States.[1] As in earlier editions, the 2006 report card evaluates the progress of the nation and all 50 states in providing Americans with education and training from high school through the baccalaureate degree. Unlike other evaluations of higher education and college guides that address the effectiveness or prestige of particular colleges and universities, *Measuring Up* examines the status of postsecondary education and training from a state-by-state and national perspective. In *Measuring Up 2006*, we evaluate, compare, and grade the states on their higher education performance in six key areas:

- *Preparation for college:* How well are young people in high school being prepared to enroll and succeed in college-level work?
- *Participation:* Do young people and working-age adults have access to education and training beyond high school?
- *Completion:* Do students persist in and complete certificate and degree programs?
- *Affordability:* How difficult is it to pay for college in each state when family income, the cost of attending college, and student financial assistance are taken into account?
- *Benefits:* How do workforce-trained and college-educated residents contribute to the economic and civic well-being of each state?
- *Learning:* How do college-educated residents perform on a variety of measures of knowledge and skills?

Today's knowledge-based global economy is highly competitive and will only become more so in the foreseeable future. The nations, states, and communities that are the most successful in developing human talent, particularly college-level knowledge and skills, will enjoy significant advantages. Conversely, those nations, states, and communities that fall behind educationally are likely also to fall behind in competing for good jobs and in achieving or maintaining high standards of living. Accordingly, a major challenge for

1 In the *Measuring Up* series, "higher education," "college education," "postsecondary education," and "education and training beyond high school" are used interchangeably to refer to academic and occupational education and training after high school offered by two- and four-year, public and private, nonprofit and for-profit institutions.

Figure 1: The United States is still among the top nations in the proportion of older adults holding a college degree … but it drops to 7th in the educational attainment of young adults.



Source: Organisation of Economic Co-operation and Development (OECD). Data represent the percentage of adults with an associate's degree or higher in 2003.

our nation and states is to incorporate international benchmarks and advances into educational policy considerations and into our assessments of progress and success. To this end, in addition to comparing states with each other, *Measuring Up 2006* introduces international comparisons for states and the United States as a whole.

How Does American Higher Education Measure Up Internationally?[2]

The United States is still among the world leaders in the proportion of 35- to 64-year-old adults with college degrees, which reflects the spectacular gains of the four decades following World War II, first through the educational efforts of the G.I. Bill and continuing with the population explosion of the baby boomers. In the 1990s, however, as the importance of a college-educated workforce in a global economy became clear, other nations began making the kinds of dramatic gains that had characterized American higher education earlier. In contrast, by the early 1990s, the progress the United States had made in increasing college participation had come to a virtual halt. For most of the 1990s, the United States ranked last among 14 nations in raising college participation rates, with almost no increase during the decade.[3] This U.S. performance has continued into this decade.

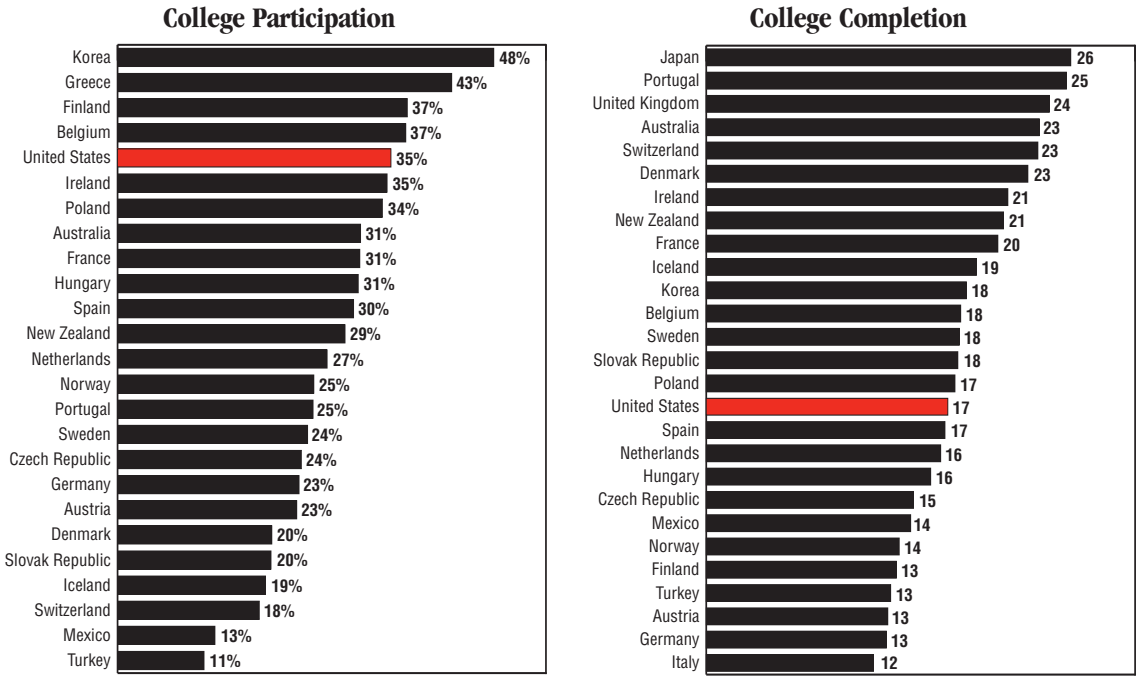
What is at risk is America's future educational and economic leadership, if the nation's younger population does not keep pace with the educational attainment levels of earlier generations and with the accelerating pace of higher education around the globe. The United States has already lost ground in several areas:

- Internationally, the United States still ranks among top nations in the educational attainment of older adults (ages 35 to 64); but it drops to seventh in the educational attainment of younger adults (ages 25 to 34) (see figure 1).

2 Comparisons are made with the member countries of the Organisation of Economic Co-operation and Development (OECD). Currently, 30 countries are affiliated with the Organisation, including Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.

3 Anthony Carnevale and Donna Desrochers, *Standards for What?* (Princeton, N.J.: Educational Testing Service, 2003), p. 69

Figure 2: The U.S. remains among the leaders in college participation … but it ranks in the bottom half in college completion.



Source: Organisation of Economic Co-operation and Development (OECD). Data are for 2003.

- In 16 states, the proportion of younger adults (ages 25 to 34) with an associate's degree or higher has fallen behind that of older adults (ages 35 to 64). These 16 states include those that account for most of the projected population growth in the United States, such as Arizona, California, Colorado, Florida, Nevada, and Texas.
- In 16 states, including Maryland, Massachusetts, Minnesota, North Carolina, and Virginia, the educational attainment of younger adults (ages 25 to 34) equals or surpasses that of older adults (ages 35 to 64), but still trails that of the best performance internationally.
- While the United States is no longer the world leader in the proportion of young adults (ages 18 to 24) enrolled in college, it remains one of the leading countries on this measure. However, the United States ranks in the bottom half—16th among 27 countries compared—in the proportion of students who *complete* college degree or certificate programs (see figure 2). Even states that compare relatively well with other states in college completion fare poorly in international comparisons. For example, when compared with other U.S. states, the best-performing state on degree completion is Georgia. When compared internationally on this measure, however, Georgia trails Japan, Portugal, the United Kingdom, Australia, Switzerland, and Denmark. Moreover, California, Texas, Maryland, New Mexico, and New Jersey rank near the very bottom when compared internationally on degree completion.

The United States: 1992 to *Measuring Up 2006*

It is not surprising that nations that have historically performed far behind the United States in college opportunity, participation, and attainment would initially achieve faster rates of growth. What was not predictable is the "wall" that the United States hit in the early 1990s and the national failure to make significant progress on key higher education indicators in the last decade and a half, while the rest of the world improved. Two additional points, however, become clear from *Measuring Up 2006*:

- Pre-collegiate preparation for college in the United States continues to improve incrementally. For example, high school graduates today are more likely to have taken upper-level math and science courses to prepare for college than high school graduates a decade ago, though many still leave high school unprepared for college-level work. However, approximately 3 in 10 high school students do not graduate on time, which limits their personal prospects and diminishes the nation's pool of college-educated workers and citizens.
- National trends and averages conceal important variations among states. The state-by-state *Measuring Up* report cards and the summaries that follow highlight significant improvements, declines, and disparities in individual states.

In addition, national college participation rates are flat. High school graduation rates have declined, although those who do graduate are more likely to attend college. The chance of a U.S. 9th grader being enrolled in college four years later is less than 40%. Large gaps in college attendance that correlate with either income or race and ethnicity have not narrowed. About 4% of working-age adults attend college part-time, a smaller proportion now compared with the early 1990s.

The proportion of students who complete college programs has improved modestly, with most of the improvement in certificates rather than degrees. Even in best-performing states, only about two-thirds of students in four-year colleges and universities complete a bachelor's degree within six years.

College affordability has declined dramatically. The primary affordability measures used in *Measuring Up 2006* are family income and the proportion of that income required to finance a year at a two-year public, four-year public, or four-year private college or university after all student financial aid is taken into account. The results show that paying for college has become significantly more difficult for most American families, particularly those with modest and low incomes. An important indicator of declining affordability is an increase in student debt. Each year more students borrow and the amount they borrow increases.

Finally, the nation lacks direct comparable measurements of student learning. This nearly complete lack of information about a crucial aspect of higher education in America accounts for the "Incomplete" grade received by most states. However, *Measuring Up 2006* for the first time includes 50 states' scores on a limited number of indicators of student learning. Nine states that made progress in their information receive a "Plus" grade.

China

China's rapidly growing economy, increasing at about 9% per year since the late 1990s, ranks among the largest in the world. The private sector, which is fueled in part by substantial growth in foreign direct investment that benefits from relatively low costs and a favorable business environment, accounts for about one-half of overall gross domestic product. While incomes are rising rapidly in the coastal areas, wide regional disparities are evident. A stated policy aim is to strive for economic growth that is more knowledge- and innovation-driven, and that is more equally shared among the population. Education figures prominently in this effort.

Educational attainment continues to improve, including higher education. Expansion of educational opportunity has been rapid and substantial, increasing from about 10% of the college-age population enrolled in 1999 to just under 20% in 2006. With 16 million enrolled in higher education, China now stands among the world leaders in this area. Growing graduate unemployment—partly attributed to uneven quality in teaching and learning—has led authorities to call for a more modest 5% annual growth in student numbers, which is still an increase of about 700,000 to 900,000 students annually. China already produces a substantial share of the world's science and engineering graduates each year. Expansion is being accommodated partly through the growth of private institutions and cross-border provision, as well as growth in public national and provincial institutions, the latter drawing more on tuition fees as a revenue stream. Public funding has targeted research and key disciplines in leading universities. For all programs, new quality-assurance processes are being implemented gradually.

The Demographic Context

The areas of challenge that *Measuring Up 2006* reveals for the nation and for each of the 50 states become even more important in relation to two major demographic realities that will heavily influence education and the economy in the United States for the next quarter century. First, 78 million post-World War II baby boomers are moving toward retirement years. The sheer size of the baby boom generation, combined with the entry of women into the workforce on an unprecedented scale, accounts in large part for the explosive growth of college-educated residents available to the workforce in the United States over the past decades. Between 1980 and 2000, for example, the prime-

PROFILE: AMERICAN HIGHER EDUCATION

Colleges and Universities

- Over 4,000 colleges and universities offer degree-granting programs.
  - 15% are public 4-year institutions.
  - 25% are public 2-year institutions.
  - 45% are private 4-year institutions.
  - 15% are private 2-year institutions.

Students

- About 15 million students are enrolled at the undergraduate level.
  - 42% attend public 2-year colleges and universities.
  - 37% attend public 4-year colleges and universities.
  - 21% attend private 2- and 4-year colleges and universities.
- Thirty-eight percent of undergraduates are enrolled part-time.
- One-third of all undergraduates are older than 24 years of age; two-thirds of this group are enrolled part-time.
- About a third of all undergraduates are non-white.

Appropriations for Higher Education

- State and local governments currently provide $72 billion for higher education, an increase of 20% since 1991 (in 2005 dollars).

age workforce (ages 25 to 54) grew by 35 million workers, an increase of almost 50%. Both proportionately and in absolute numbers, more baby boomers completed high school and enrolled in and completed college programs than any previous generation of Americans. These increased rates resulted in the doubling of the college-educated workforce between 1980 and 2000.[4]

The second demographic reality concerns the difficulty of replacing these well-educated workers. The American workforce is projected to grow much more slowly during the first decades of the 21st century than it has since World War II, with a predicted increase of only about three million prime-age workers through 2020—in contrast to the 35 million added between 1980 and 2000.[5] Moreover, the composition of the next generation reflects the demographic shifts that have occurred within our nation's youth. That is, a larger proportion of America's future workforce will come from ethnic minority and low-income groups. Many workers in these groups will be first-generation college students who are served least effectively by education at all levels, whether elementary, secondary, or postsecondary. Such students graduate from high school, enroll in college, and complete college programs at significantly lower rates than the baby boomers that preceded them.[6]

In short, America's educational strengths are heavily concentrated in the nation's older population. Their successors in the workforce will be drawn from a smaller pool comprised primarily of young adults who, if current educational trends persist, are less likely to have college-level education and training. Because of this educational disparity, individuals with college-level skills may be in short supply, which may in turn severely limit individual opportunity and erode economic growth.[7] The implications of these two demographic realities have received much less attention than have other more immediate concerns regarding the baby boomers, such as retirement and health care costs. Yet they are of equal or greater importance to the economic strength of the nation.

The expansion of a knowledge-based global economy has raised the bar for higher education in the United States—particularly in light of the rapid growth of college opportunities in many other nations. These nations have made their greatest gains in college access and attainment more recently than the United States has. One consequence is that the comparative educational advantage of these countries rests with their younger adults and workers. As the baby boomers in this country reach retirement age, a key challenge for the United States—and each of the 50 states—will lie in our collective ability to improve rapidly the educational opportunities and achievement of our younger Americans.

4 David T. Ellwood, "The Sputtering Labor Force of the Twenty-First Century: Can Social Policy Help?" in Alan B. Krueger and Robert M. Solow, eds., *The Roaring Nineties: Can Full Employment Be Sustained?* (New York, NY: The Russell Sage Foundation, 2001), p. 433; Committee for Economic Development, *Cracks in the Education Pipeline* (Washington, D.C.: 2005), p. 22.

5 Ibid.

6 The National Center for Public Policy and Higher Education, "The Educational Pipeline," *Policy Alert*, April 2004.

7 Thomas J. Tierney, "How Is American Higher Education Measuring Up? An Outsider's Perspective," in James B. Hunt Jr. and Thomas J.Tierney, *American Higher Education: How Does it Measure Up for the 21st Century?* (San Jose, CA: The National Center for Public Policy and Higher Education, 2006).

A NATIONAL OVERVIEW: IMPROVEMENTS, DECLINES, AND DISPARITIES

PREPARATION

Since the early 1990s, every state has continued to improve on the extent to which young people are academically prepared for college, although the level of improvement across states is uneven. State improvements in this category are greater than in other categories measured, yet these improvements have not resulted in gains in some important areas, including the percentage of young adults graduating from high school in four years. Meanwhile, the nation continues to experience disparities in educational performance by race/ethnicity and family income.

45 states have improved on more than half of the indicators

5 states have improved on some but no more than half of the indicators

No state has declined on most or all of the indicators

Improvements

8th graders scoring at or above "proficient" on national math assessments

Massachusetts:	23% to 43%
North Carolina:	12% to 32%
Ohio:	18% to 33%
Delaware:	15% to 30%
South Carolina:	15% to 30%

Low-income 8th graders scoring at or above "proficient" on national math assessments

Massachusetts:	7% to 22%
Texas:	6% to 17%

Number of scores in top 20% on college entrance exams per 1,000 high school graduates

Massachusetts:	138 to 253
North Carolina:	75 to 161

Number of scores that are 3 or higher on Advanced Placement tests per 1,000 11th and 12th graders

Maryland:	110 to 275
North Carolina:	68 to 201

8th graders enrolled in algebra

Utah:	35% to 60%
Nevada:	7% to 26%
Missouri:	10% to 23%
Indiana:	9% to 22%

9th to 12th graders enrolled in at least one upper-level math course

North Carolina:	40% to 72%
Utah:	45% to 74%
Texas:	38% to 64%
Nebraska:	39% to 61%
Ohio:	39% to 60%

9th to 12th graders enrolled in at least one upper-level science course

West Virginia:	24% to 44%
Iowa:	28% to 43%
Nebraska:	23% to 37%

Declines

9th graders graduating from high school within four years

New York:	67% to 52%
Hawaii:	78% to 65%
Alaska:	74% to 61%
Tennessee:	69% to 57%
Wyoming:	84% to 73%
Georgia:	64% to 54%
Florida:	65% to 56%

8th graders scoring at or above "proficient" on national reading assessments

Connecticut:	42% to 34%
Arizona:	28% to 23%
West Virginia:	27% to 22%
New Mexico:	24% to 19%

8th graders scoring at or above "proficient" on national science assessments

Maine:	41% to 34%
Connecticut:	36% to 33%

8th graders enrolled in algebra

Wyoming:	24% to 15%
North Dakota:	20% to 16%

9th to 12th graders enrolled in at least one upper-level science course

Florida:	32% to 27%

Disparities

18- to 24-year-olds with a high school credential

Colorado:	92% (white), 68% (non-white)
Arizona:	92% (white), 69% (non-white)
Illinois:	95% (white), 73% (non-white)
Maryland:	97% (high income), 68% (low income)
New York:	96% (high income), 72% (low income)
Connecticut:	100% (high income), 78% (low income)

9th to 12th graders enrolled in at least one upper-level math course

Utah:	99% (white), 57% (Hispanic)
Ohio:	67% (white), 42% (black), 39% (Hispanic)

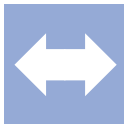
9th to 12th graders enrolled in at least one upper-level science course

Nevada:	83% (white), 44% (Hispanic)
Texas:	91% (white), 68% (Hispanic)

PARTICIPATION

The nation as a whole has made no notable progress since the early 1990s in enrolling young adults or working-age adults in education and training beyond high school. Furthermore, participation in education beyond high school still varies by race/ethnicity and annual family income.

8 states have improved on more than half of the indicators



28 states have improved on some but no more than half of the indicators

14 states have declined on most or all of the indicators

Improvements

The chance of 9th graders enrolling in college anywhere within four years

Arkansas:	36% to 42%
Minnesota:	48% to 53%

18- to 24-year-olds enrolled in college

Rhode Island:	31% to 41%
Connecticut:	34% to 42%
California:	32% to 40%
Kentucky:	24% to 32%

Declines

The chance of 9th graders enrolling in college anywhere within four years

Hawaii:	44% to 32%
Vermont:	46% to 35%
New York:	45% to 37%
Nebraska:	55% to 48%
Illinois:	49% to 42%
Oregon:	40% to 33%

Disparities

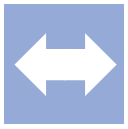
18- to 24-year-olds enrolled in college

Colorado:	40% (white), 17% (non-white)
New Jersey:	47% (white), 27% (non-white)
Pennsylvania:	39% (white), 21% (non-white)
Nevada:	35% (white), 18% (non-white)
Maryland:	43% (white), 28% (non-white)
Virginia:	58% (high income), 14% (low income)
Connecticut:	58% (high income), 16% (low income)
Ohio:	61% (high income), 20% (low income)
New Jersey:	51% (high income), 20% (low income)
Illinois:	52% (high income), 23% (low income)

AFFORDABILITY

The nation's colleges and universities have become less affordable for students and their families since the early 1990s. This year, no states received an "A" or a "B" in this category, and 43 states flunked, reflecting the deterioration of college affordability.

1 state has improved on more than half of the indicators



32 states have improved on some but no more than half of the indicators

17 states have declined on most or all of the indicators

Improvements

Percentage of annual family income needed to pay net college costs at community colleges*

Louisiana:	22% to 20%

State support of need-based financial aid compared with the federal support

Washington:	24% to 86%
California:	27% to 53%
Maryland:	27% to 53%

Declines

Percentage of annual family income needed to pay net college costs at public four-year institutions*

Ohio:	28% to 42%
New Jersey:	24% to 37%
Iowa:	18% to 30%
Oregon:	25% to 36%
Washington:	20% to 31%
Illinois:	25% to 35%

State support of need-based financial aid compared with the federal support

Illinois:	89% to 73%
New Jersey:	104% to 95%
Vermont:	90% to 84%

* Net college costs equal tuition, room, and board minus financial aid. The lower the figures, the better the performance on this indicator.

COMPLETION

The states have made modest gains over the last several years in the proportion of students completing degrees and certificates, with the fastest growth in non-degree certificates awarded. However, even the best performance among states is not impressive. For instance, in the best-performing states, only 65% of first-year community college students return for their second year, and only 67% of students at four-year institutions complete a bachelor's degree within six years of enrolling. In fact, the United States compares very poorly with other countries in this category, according to the international comparisons included in *Measuring Up 2006*.

35 states have improved on more than half of the indicators

13 states have improved on some but no more than half of the indicators

2 states have declined on most or all of the indicators

Improvements

Certificates, degrees, and diplomas awarded per 100 undergraduate students enrolled

Arizona:	10 to 17
Georgia:	16 to 22
Washington:	15 to 20
Utah:	14 to 19

Declines

Bachelor's degree completion within six years of enrolling

Rhode Island:	72% to 64%

Disparities

Certificates, degrees, and diplomas awarded per 100 undergraduate students enrolled

South Dakota:	20 (white), 10 (Native American)
Illinois:	18 (white), 11 (Hispanic)
Connecticut:	18 (white), 13 (black), 13 (Hispanic)
Maryland:	17 (white), 12 (black)
New Jersey:	16 (white), 12 (black), 11 (Hispanic)

BENEFITS

Since the early 1990s, most states have increased their "educational capital" as measured by the percentage of adult residents with a bachelor's degree or higher. As a result, many states have seen an increase in the economic benefits that accrue from having a highly educated population.

40 states have improved on more than half of the indicators

8 states have improved on some but no more than half of the indicators

2 states have declined on most or all of the indicators

Improvements

Adults (ages 25 to 65) with a bachelor's degree or higher

Maryland:	27% to 37%
Pennsylvania:	21% to 30%
Alabama:	15% to 24%
Missouri:	23% to 31%
Connecticut:	30% to 37%
Michigan:	20% to 27%
Washington:	27% to 32%

Increase in total personal income as a result of the percentage of the population holding a bachelor's degree or higher

Maryland:	8% to 12%
Pennsylvania:	8% to 12%
Connecticut:	7% to 11%
Washington:	7% to 11%

Disparities

Adults (ages 25 to 65) with a bachelor's degree or higher

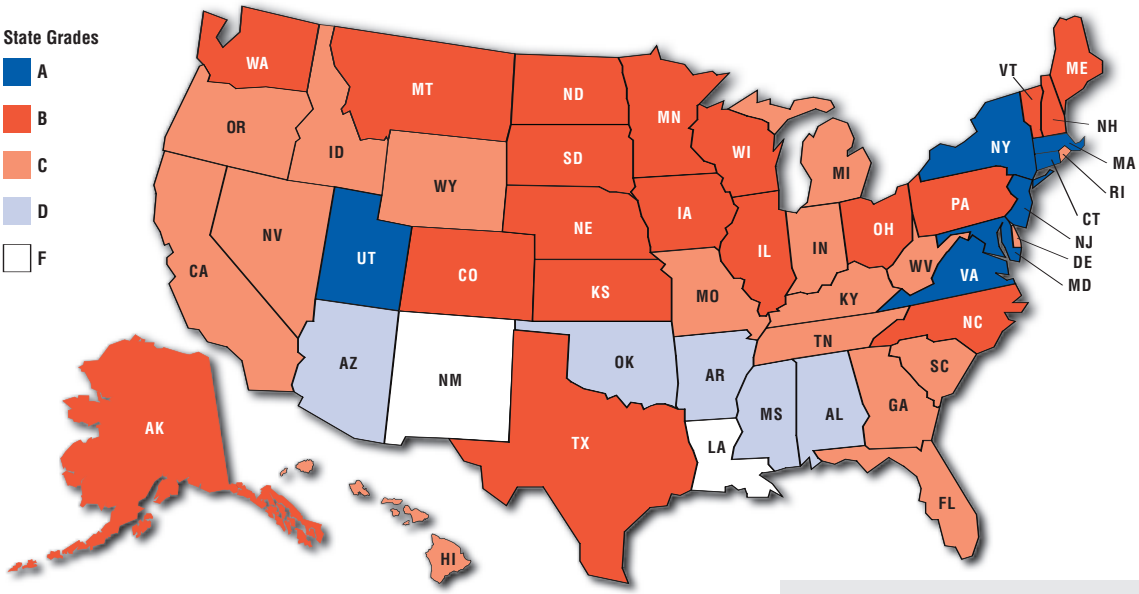
Colorado:	45% (white), 17% (non-white)
New Mexico:	35% (white), 13% (non-white)
Massachusetts:	44% (white), 25% (non-white)
Texas:	35% (white), 16% (non-white)

LEARNING

This year, 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 conducted in 2003. For more information, see "Grading Learning: Progress and Prospects," page 23.

THE NATIONAL PICTURE: 2006 SNAPSHOT

PREPARATION



A Connecticut, Maryland, Massachusetts, New Jersey, New York, Utah, Virginia **B** Alaska, Colorado, Illinois, Iowa, Kansas, Maine, Minnesota, Montana, Nebraska, New Hampshire, North Carolina, North Dakota, Ohio, Pennsylvania, South Dakota, Texas, Vermont, Washington, Wisconsin **C** California, Delaware, Florida, Georgia, Hawaii, Idaho, Indiana, Kentucky, Michigan, Missouri, Nevada, Oregon, Rhode Island, South Carolina, Tennessee, West Virginia, Wyoming **D** Alabama, Arizona, Arkansas, Mississippi, Oklahoma **F** Louisiana, New Mexico. **Massachusetts is the top-performing state in preparation.**

PREPARATION

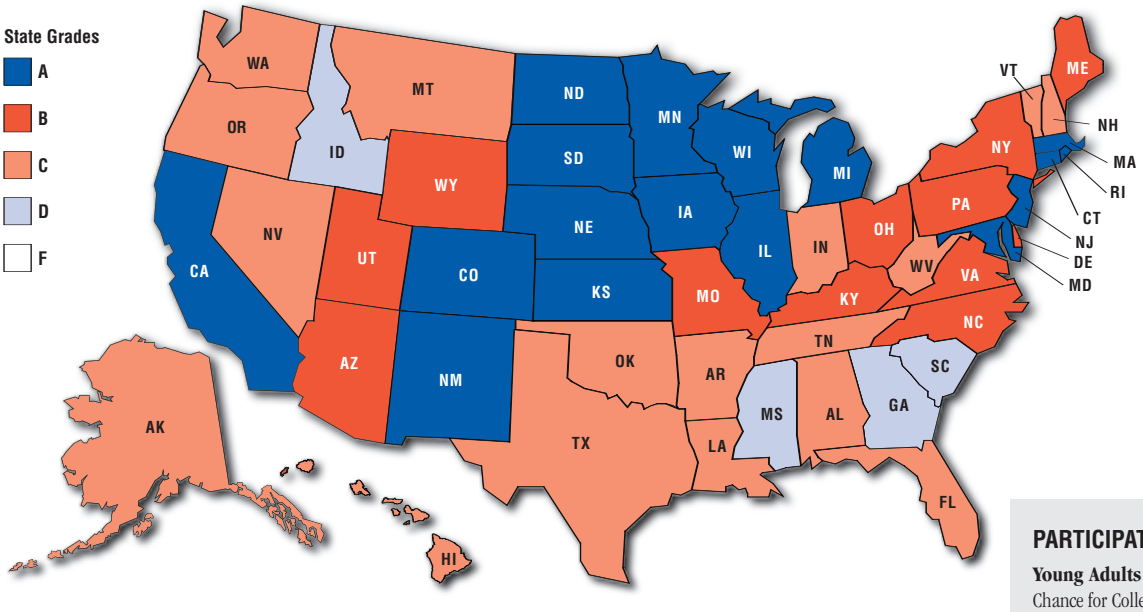
High School Completion
High School Credential

K–12 Course Taking
Math Course Taking
Science Course Taking
Algebra in 8th Grade
Math Course Taking in 12th Grade

K–12 Student Achievement
Math Proficiency
Reading Proficiency
Science Proficiency
Writing Proficiency
Math Proficiency among Low-Income
College Entrance Exams
Advanced Placement Exams

Teacher Quality
Students taught by qualified teachers

PARTICIPATION



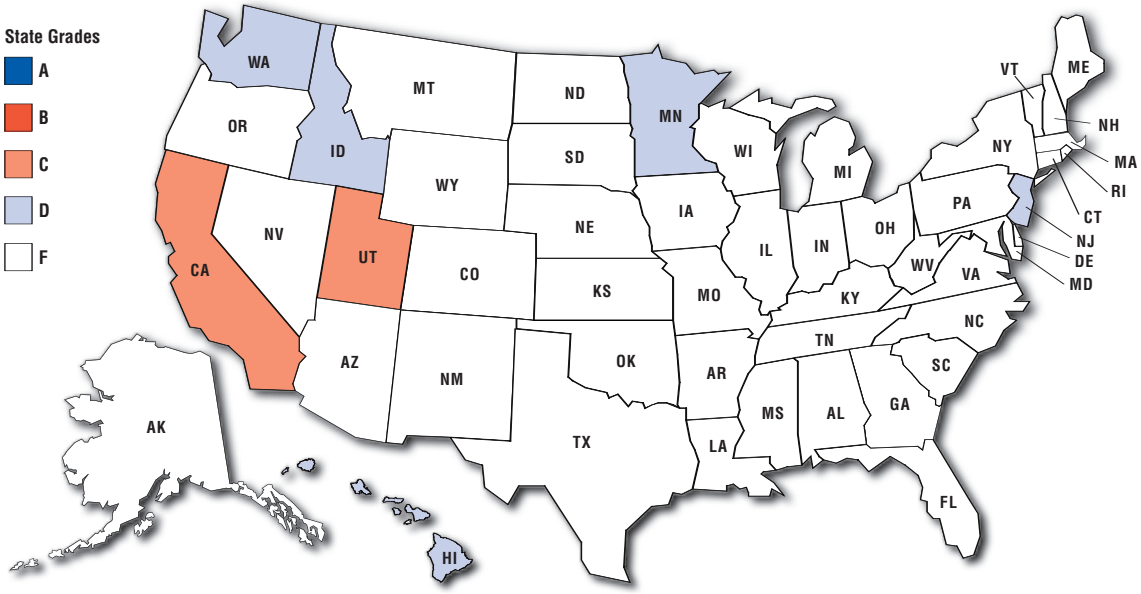
A California, Colorado, Connecticut, Illinois, Iowa, Kansas, Maryland, Massachusetts, Michigan, Minnesota, Nebraska, New Jersey, New Mexico, North Dakota, Rhode Island, South Dakota, Wisconsin **B** Arizona, Delaware, Kentucky, Maine, Missouri, New York, North Carolina, Ohio, Pennsylvania, Utah, Virginia, Wyoming **C** Alabama, Alaska, Arkansas, Florida, Hawaii, Indiana, Louisiana, Montana, Nevada, New Hampshire, Oklahoma, Oregon, Tennessee, Texas, Vermont, Washington, West Virginia **D** Georgia, Idaho, Mississippi, South Carolina. **New Mexico is the top-performing state in participation.**

PARTICIPATION

Young Adults
Chance for College
Young Adult Enrollment

Working-Age Adults
Working-Age Adult Enrollment

AFFORDABILITY



C California, Utah D Hawaii, Idaho, Minnesota, New Jersey, Washington F Alabama, Alaska, Arizona, Arkansas, Colorado, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Vermont, Virginia, West Virginia, Wisconsin, Wyoming. **Utah is the top-performing state in affordability.**

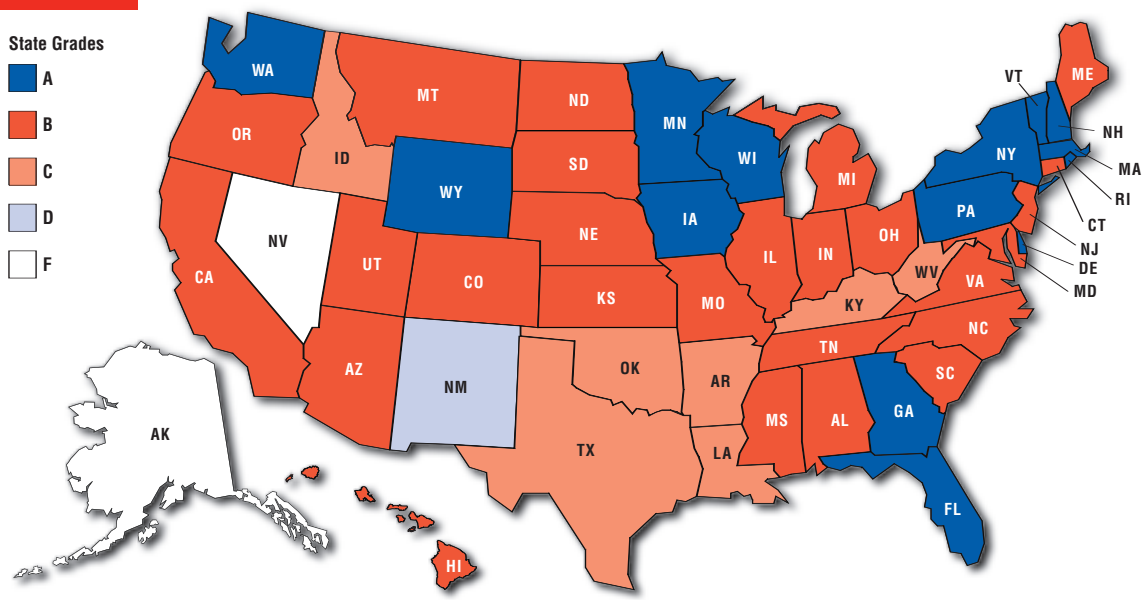
AFFORDABILITY

Family Ability to Pay
At Community Colleges
At Public 4-Year Colleges
At Private 4-Year Colleges

Strategies for Affordability
Need-Based Financial Aid
Low-Priced Colleges

Reliance on Loans
Low Student Debt

COMPLETION



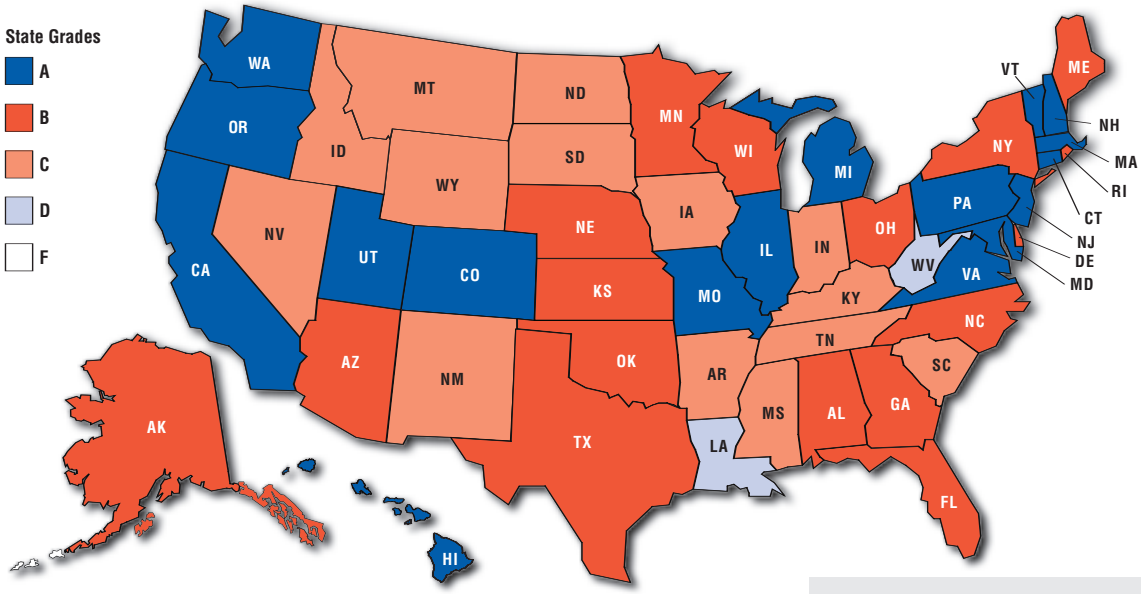
A Delaware, Florida, Georgia, Iowa, Massachusetts, Minnesota, New Hampshire, New York, Pennsylvania, Rhode Island, Vermont, Washington, Wisconsin, Wyoming B Alabama, Arizona, California, Colorado, Connecticut, Hawaii, Illinois, Indiana, Kansas, Maine, Maryland, Michigan, Mississippi, Missouri, Montana, Nebraska, New Jersey, North Carolina, North Dakota, Ohio, Oregon, South Carolina, South Dakota, Tennessee, Utah, Virginia C Arkansas, Idaho, Kentucky, Louisiana, Oklahoma, Texas, West Virginia D New Mexico F Alaska, Nevada. **New Hampshire is the top-performing state in completion.**

COMPLETION

Persistence
Students Returning at 2-Year Colleges
Students Returning at 4-Year Colleges

Completion
Bachelor's Degree Completion in 6 Years
All Degree Completion

BENEFITS



A California, Colorado, Connecticut, Hawaii, Illinois, Maryland, Massachusetts, Michigan, Missouri, New Hampshire, New Jersey, Oregon, Pennsylvania, Utah, Vermont, Virginia, Washington B Alabama, Alaska, Arizona, Delaware, Florida, Georgia, Kansas, Maine, Minnesota, Nebraska, New York, North Carolina, Ohio, Oklahoma, Rhode Island, Texas, Wisconsin C Arkansas, Idaho, Indiana, Iowa, Kentucky, Mississippi, Montana, Nevada, New Mexico, North Dakota, South Carolina, South Dakota, Tennessee, Wyoming D Louisiana, West Virginia. **Massachusetts is the top-performing state in benefits.**

BENEFITS

Educational Achievement
Adults with Bachelor's Degree or Higher

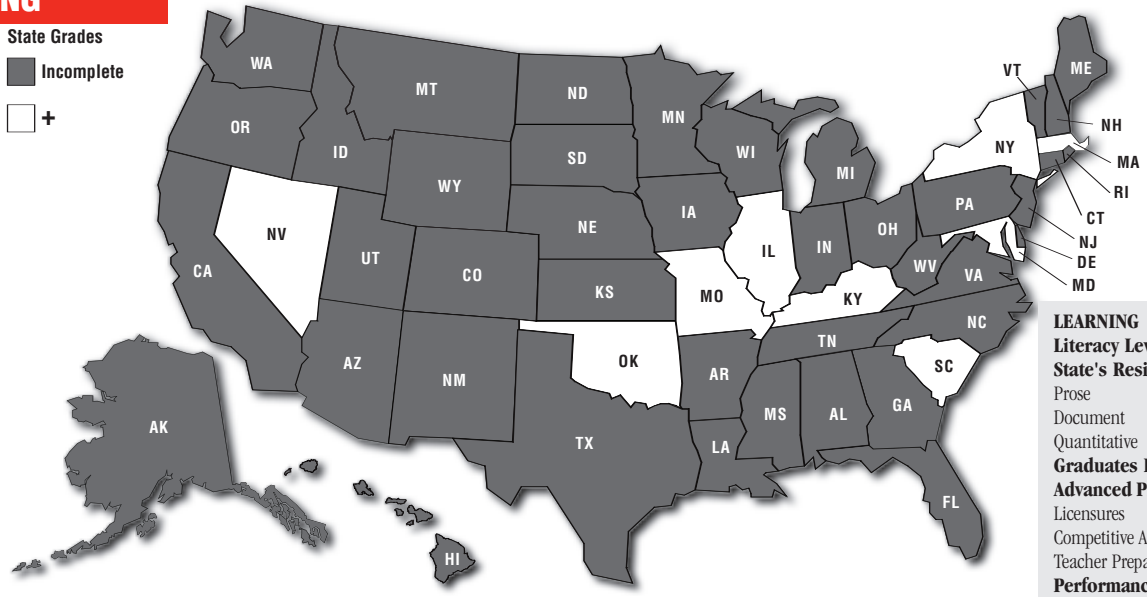
Economic Benefits
Increased Income from Bachelor's Degree
Increased Income from Some College

Civic Benefits
Population Voting
Charitable Contributions
Volunteering

Adult Skill Levels*
Quantitative Literacy
Prose Literacy
Document Literacy

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

LEARNING



What do we know about learning as a result of education and training beyond high school?
Measuring Up 2006 gives a "Plus" in learning to nine states (Illinois, Kentucky, Maryland, Massachusetts, Missouri, Nevada, New York, Oklahoma, and South Carolina) that have developed learning measures.

LEARNING

Literacy Levels of the State's Residents
Prose
Document
Quantitative

Graduates Ready for Advanced Practice
Licensures
Competitive Admissions
Teacher Preparation

Performance of College Graduates
From Four-Year Institutions
Problem-Solving
Writing
From Two-Year Institutions
Reading
Quantitative Skills
Locating Information
Writing

STATE GRADES 2006

	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

COLLEGE AFFORDABILITY:
Colleges, States Increase Financial Burdens on Students and Families

By Patrick M. Callan

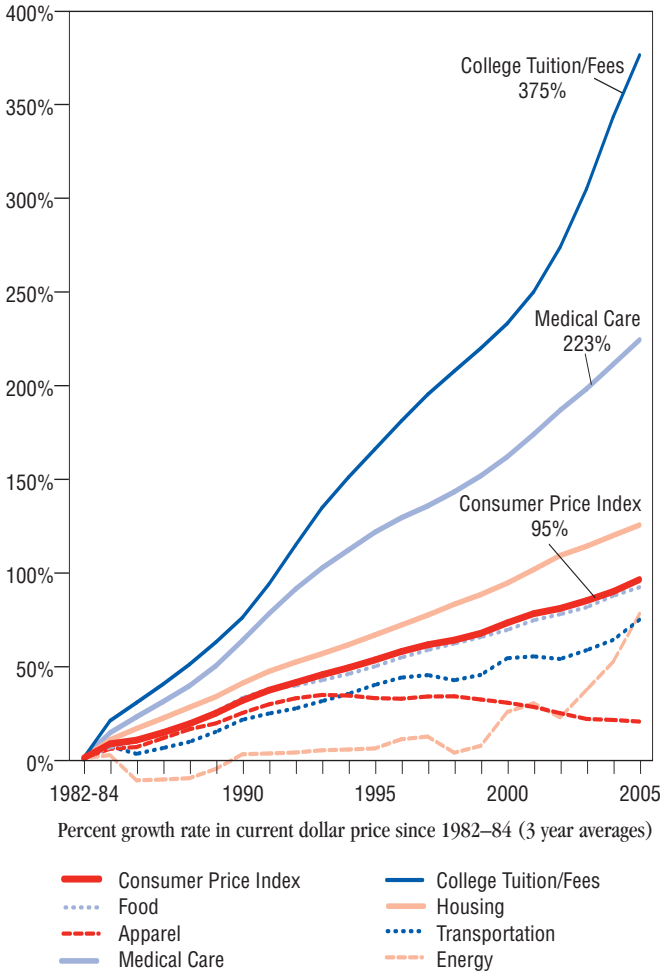
College affordability continues to decline in the United States. Of all the performance categories in the *Measuring Up* report cards, the state results for affordability are the most dismal. Since our previous edition of *Measuring Up*, the number of states receiving "F" grades increased from 36 to 43. Even after all financial aid is taken into account, students and their families must devote an increasing share of their income and borrow more to pay for a year of college education at almost all public and private two- and four-year campuses. Only the wealthiest of American families are exempted from declining college affordability. *Measuring Up 2006* tracks the decline from the early 1990s, a decline that, as reflected in state grades, is even greater than that reported in the 2004 report card.

It is no coincidence that during these years of declining affordability, U.S. college access rates have flattened, and the gap in rates of college attendance between low-income and other Americans has persisted. Family income remains the best predictor of who will go to college and what college they will attend. Declining affordability is clearly a critical factor in these choices:

- Declining affordability discourages many low-income students from enrolling in challenging high school courses and even from graduating from high school. Those who believe college is beyond their financial reach have little reason to prepare for it.
- Many students resort to "trading down," that is, choosing less expensive colleges than those that would best fit their educational goals and qualifications. Others take on large debts and work more hours than is advisable during the school year, which may contribute to academic difficulties, lengthen the time in college, or even jeopardize degree completion.
- Current college graduates—and many students who do not graduate—are the most heavily indebted young Americans in our history. Large debt burdens may discourage some students from accumulating more debt to pursue advanced study, or from careers that are not highly remunerative, such as teaching or service in nonprofit organizations.[1]

The issue of college affordability as it is experienced by families and students is captured by figure 1. Since the early 1980s, the rate of increase in the price of college has far outstripped price increases in other sectors of the economy, even health care. Over these years, median family income increased by 127%; college tuition and fees by 375%.

Figure 1. The increase in the price of college has outstripped price increases in other sectors of the economy.



Source: Percent growth rates calculated based on Consumer Price Index for All Urban Consumers, available at the Bureau of Labor Statistics website, http://stats.bls.gov/. All industries above are components of the CPI.

College Tuition/Fees represent sticker price tuition and fees less all types of grant aid except grants related to athletics and other student talents for undergraduate and graduate studies at 2-year or 4-year colleges, major universities, and professional schools. Room and board charges and textbook charges are not included. Data were collected from 88 metropolitan cities. **Food & Beverage** includes food at home; food away from home, and alcoholic beverages. **Housing** includes rent of primary residence, lodging away from home, owners' equivalent rent of primary residence, and tenants' and household insurance. (Only the "shelter" category was used in this analysis.) **Apparel** includes men's and boys' apparel, women's and girls' apparel, infants' and toddlers' apparel, and footwear. **Transportation** includes private transportation (new and used motor vehicles, fuel, parts and equipment, maintenance and repair) and public transportation. **Medical Care** includes medical care commodities (prescription drugs, over-the-counter-drugs, and other medical equipment and supplies) and medical care services (professional medical services, hospital or nursing home services, and health insurance imputation). **Energy** includes fuel oil, other household fuels, electricity, utility natural gas services, and motor fuel.

1 Michael Anft, "A Growing Debt to Society: Young graduates shun nonprofit employers," *The Chronicle of Philanthropy*, volume 18, 2006; Amanda Ballard, "Understanding the Next Generation of Nonprofit Employees: The Impact of Educational Debt," unpublished draft paper, 2005 (available at www.buildingmovement.org/artman/uploads/educational_debt_001.pdf).

Tuition and fees represent the fastest growing component of the cost of college to students and families. For public colleges and universities, tuition is also the cost most susceptible to public policy influence. Other costs—e.g., housing, books, and transportation—are also part of the affordability equation. And the 127% increase in median family income since 1983 masks the disproportionate impact of changes in college affordability on families of differing incomes. Table 1 shows the net costs of college attendance as a percentage at the lowest, middle, and highest quintiles of family income (the net costs of college attendance include tuition, room and board minus financial aid). Compared with 1992, families in the lowest income quintile need an additional 16% of their income to pay for a public four-year college education in 2005. In contrast, the highest income families only need an additional 1% of their income to pay for the same college costs.

Table 1. Financial burden to pay for college has increased for almost all families … but increased more for middle- and low-income families. Compared with 1992, families in the lowest quintile need an additional 16% of their income to pay for the increased costs at a public four-year college in 2005. In contrast, the highest income families only need an additional 1% of their income to pay for such costs.

Net college costs* as a percent of family income

At public four-year colleges and universities	1992	2005 (MU 2006)	% pts increases	Top-Bottom gaps
Lowest 20% income families	57%	73%	16%	
Middle 20%	17%	23%	5%	50% pts (1992)
Highest 20%	7%	9%	1%	64% pts (2005)
At public two-year colleges				
Lowest 20% income families	50%	58%	8%	
Middle 20%	14%	17%	3%	44% pts (1992)
Highest 20%	6%	7%	1%	51% pts (2005)

*Net college costs equal tuition, room, and board minus financial aid. The numbers may not exactly equal due to rounding (Source: *Measuring Up 2006*).

Although declining affordability clearly has its greatest impact on low-income families, we should not be surprised that public opinion polls show widespread concern among all Americans. In fact, the public reports greater concern about the cost of their children's college education being priced beyond the income of the average family than about a secure retirement, housing, or automobiles, other elements of the "American dream."[2]

Tuition

Higher education experts and leaders disagree when college costs and prices are discussed. Some endorse higher tuition, some do not; some are sanguine about growing student debt, others are not. Declining affordability is a fact, however, regardless of opinions about tuition and debt. Although a serious concern of most families and students, this trend is not the consequence of explicit public policy or public consensus.[3] Rather, this trend represents the cumulative results of responses to economic pressures, demographic shifts, and public policy drift that have undermined college affordability, such as:

- The knowledge-based economy increasingly eliminates those without education and training beyond high school from employment opportunities that can support a middle-class standard of living. In the recent past, college was the most advantageous route to the middle class, but there were many other paths for the highly motivated and hardworking. In today's economy, colleges and universities have become the gateway to the middle class for most Americans.
- The number of high school graduates and the proportion of high school students who aspire to college have both increased over this decade.
- States, for the most part, lack effective policies for college and university tuition.
- States have often made drastic reductions in college appropriations in tight budget years; college and university leaders and trustees have usually acquiesced in budget cuts if all or a substantial portion of reductions can be replaced with increased tuition.

2 John Immerwahr, "Public Concerns About the Price of College." In *Losing Ground: A National Status Report on the Affordability of American Higher Education*, San Jose, CA: The National Center for Public Policy and Higher Education, 2002.

3 Deborah Wadsworth, "Ready or Not? Where the Public Stands on Higher Education Reform," in Richard H. Hersh and John Merrow, eds., *Declining by Degrees: Higher Education at Risk*, New York, NY: Palgrave McMillan, 2005.

- Many states have delegated tuition authority to public colleges and universities, often as part of deregulation or decentralization policies. The absence of state influence on these decisions has inevitably led to higher, often precipitous, tuition increases.

None of these factors alone would seem responsible for the long-term decline in college affordability at the very point in time when more Americans than ever need college opportunity and when the nation needs more college-educated workers and citizens. It is their convergence that has permitted "pricing with impunity" and the consequent decline in college affordability. Market forces and public policy might be said to have colluded to undermine college affordability.

Student Financial Assistance

Historically, the major public purpose of financial assistance has been enabling eligible but needy students to enroll in college. Most of this aid comes from federal and state governments and from colleges and universities. Student financial assistance from all these sources has increased to $45 billion, or an increase of 140% since 1991. But these increases have not been large enough to keep pace with the increased costs of college attendance, particularly not with tuition. For example, the nation's largest source of financial aid for low-income college students is the Federal Pell Grant program. The average Pell Grant covered 76% of tuition at four-year colleges and universities in 1990-91. Between 1991 and 2005 Federal Pell Grant funding increased by 84%. But the average Pell Grant currently covers only 48% of tuition at these institutions, a *decline* in purchasing power despite *increased* federal investment.[4]

By the mid-1990s, pressure from steep and rapid tuition increases began to squeeze middle-income families, who made their concern known to political leaders. State and federal governments responded with programs that were no longer directed at the most needy but were created to cushion the impact of rising tuition on middle-class families. These include: federal tuition tax credits and deductions, state merit-based programs, and tax advantaged savings plans. Typically these programs do not require demonstration of financial need and, in the case of federal tax credits, actually exclude the most financially needy from eligibility. Many of the programs have purposes beyond student assistance, among them increasing college participation, offering tax relief, and encouraging the most academically talented students to forego opportunities to attend out-of-state institutions and to attend their own state's institutions. Whatever the purposes or intentions, these programs represent fairly recent claims by the middle class for college financial assistance.

Collectively, colleges and universities account for the largest amount of student financial aid (see table 2). As aid was refocused in Washington and state capitols to address the middle class college squeeze, many four-year colleges and universities were—and are—doing their own refocusing. Their reasons were different, but the results were similar. For institutions, the stimulus is the intense competition for talented students and for the prestige and rankings that reward the winners. For many institutions, the principal *public purpose* of financial assistance to

Table 2. Middle- and upper-income students receive larger amounts of institutional grant aid than low-income students do.

Full-time dependent undergraduates receiving financial grant aid, 2003-04, by income

Provider	Federal Government		State Government		Institutions	
Parental Income (2002)	% receiving grant aid	average award	% receiving grant aid	average award	% receiving grant aid	average award
Below $20,000	73%	$4,000	36%	$2,900	36%	$4,700
$20,000-39,999	63%	$2,900	38%	$2,700	40%	$5,000
$40,000-59,999	22%	$1,700	28%	$2,300	35%	$5,500
$60,000-79,999	4%	$1,500	19%	$2,000	34%	$5,700
$80,000-99,999	1%	$2,300	14%	$2,100	34%	$6,100
$100,000 or more	1%	$1,700	8%	$2,400	29%	$6,200

Source: NCES (2005), '2003-04 NPSAS: Student Financial Aid Estimates for 2003-04.'

4 Figures are calculated based on the data from *Trends in Student Aid* and *Trends in College Pricing* (College Board, 2005, New York, NY: College Board).

needy students has been transformed into the narrower *institutional purpose* of a recruitment incentive to attract desirable students. The consequence is that average institutional financial aid grants are larger for students from middle- and high-income families than they are for students from the lower-income families. In this competition for desirable students, those from middle- and high-income families often bring the higher SAT scores that weigh heavily in college rankings. And for a student from these families, financial assistance may well expand his or her choice of institution. In contrast, without such assistance, a student from a lower-income family may not be able to attend any college. For institutions themselves, a political consequence of their shift of aid from the neediest to the more affluent students may well have severely compromised their credibility as advocates for government need-based financial aid programs, such as Federal Pell Grants. By no means are we condemning competition among colleges and universities, whether in athletics or talented desirable students. Our concern here is with the extent to which the current institutional competition does not recognize and respect a primary public goal and purpose.

The most common response to increases in the cost of college by students and families is increased borrowing—more students incur debt and the amount they borrow increases each year. Since 1980 the federal financial aid system has been transformed—with little explicit and informed policy debate—from a system characterized mainly by need-based grants to one dominated by loans. The majority of bachelor's degree recipients graduate with debt: 62 % of public institution graduates and 73 % of those from private nonprofit institutions.[5] And many low-income students choose not to enroll in college rather than incur debt.

Affordability and Underperformance

Four successive editions of *Measuring Up* report cards have now documented the deterioration of college affordability for families and students. The performance of the nation and the states on this important aspect of college opportunity is so poor that some have even asked whether it makes sense to continue to grade affordability when so many states receive "Ds" and "Fs." But denial is not an option for students and families, and neither is it a strategy that will encourage the country, the states, and the colleges and universities to confront difficult problems.

As critical as it is, the college affordability problem does not exist in a vacuum. It is one of many symptoms of the underperformance of American higher education that signal the urgent need for a comprehensive and fundamental reexamination of higher education finance. This report card highlights these symptoms: flat college participation rates; lack of progress in extending college opportunity for low-income Americans; poor rates of completion of college programs; escalating costs and prices; and a financial aid system that is less focused on the nation's need to improve college access and attainment. Current approaches to higher education finance, including some of the policy and practices described above, poorly address these symptoms and may, in fact, exacerbate the underlying condition of underperformance. Additional public investment is essential, especially in need-based student aid. However, if the nation and the states are to realize improvements commensurate with their investments, they must raise and answer critical questions of fairness, efficiency, effectiveness, incentives, and accountability.

The pending report of the Secretary's National Commission on the Future of Higher Education suggests that the problem of the higher education finance system is that the system is "dysfunctional." The report singles out the federal financial aid system as particularly in need of fundamental overhaul. The cumulative finding of the four *Measuring Up* report cards since 2000 strongly support the Commission's conclusion.

The context for policy discussion and debate about college affordability must be the core public purpose of American higher education: That is, assurance that all Americans, regardless of economic status, have the opportunity for college-level education and training that will enable them to fully participate in the civic, economic, and cultural life of our nation.

Patrick M. Callan is president of the National Center for Public Policy and Higher Education.

5 College Board, *Trends in Student Aid*, New York, NY:College Board, 2005.

GRADING LEARNING: PROGRESS AND PROSPECTS

By Peter T. Ewell

It has been six years since *Measuring Up 2000* awarded all 50 states an "Incomplete" in Learning because comparable data were not available to make meaningful state-to-state comparisons in this category. Since then, much has been accomplished, but a great deal more remains to be done.

Measuring Up 2004 for the first time awarded a "Plus" in Learning to five states—Illinois, Kentucky, Nevada, Oklahoma, and South Carolina—because of their pioneering participation in a national demonstration project conducted by the National Forum on College-Level Learning and funded by the Pew Charitable Trusts.[1] These states are joined in 2006 by four more—Maryland, Massachusetts, Missouri, and New York—that participated in the State Assessment of Adult Literacy (SAAL), a state-level version of the National Assessment of Adult Literacy (NAAL) conducted in 2003.[2]

Measuring Up 2006 also features a 50-state demonstration of one component of *Measuring Up*'s Learning model—"Graduates Ready for Advanced Practice." This component assesses the quality of each state's "educational capital" by comparing the information provided by the hundreds of thousands of professional licensure and graduate admissions examinations completed by the nation's college graduates each year (see accompanying text box for a description of the *Measuring Up* Learning model).

This slow but steady evolution has been accompanied by growing national interest in taking stock of college-level learning. In the broadest terms, events of the opening decade of the new millennium highlight the nation's competitive challenge in producing and harnessing our educational capital. Where we once led the world, the United States is now only seventh in the proportion of young adults (ages 25 to 34) who have earned a postsecondary degree—and we have been overtaken in just one decade. Meanwhile, results of the NAAL, although much debated, suggest that the abilities of the nation's college graduates have slipped during the same period.[3] Spurred by these findings, bodies like the Secretary of Education's Commission on the Future of Higher Education have underscored the need, among many others, for more systematic information about what college graduates know and can do.

THE LEARNING MODEL

Learning	State
Literacy Levels of the State's Residents (25%)	
Prose	?
Document	?
Quantitative	?
Graduates Ready for Advanced Practice (25%)	
Licensures	?
Competitive admissions	?
Teacher preparation	?
Performance of College Graduates (50%)	
From four-year institutions	
Problem-solving	?
Writing	?
From two-year colleges	
Reading	?
Quantitative skills	?
Locating information	?
Writing	?

1 What are the abilities of the college-educated population?

2 To what extent do colleges and universities educate students to be capable of contributing to the workforce?

3 How well can graduates of two- and four-year colleges and universities perform complex problem-solving tasks?

Note: Measures included under the first two clusters are available nationally and can be calculated for all 50 states. Measures included in the third will require special data-collection efforts similar to those undertaken by the five demonstration project states in 2004.

Both states and institutions have responded positively to these challenges, though progress has been uneven. Kentucky and Oklahoma have already committed to repeating the *Measuring Up* Learning model next year. States like South Dakota and Tennessee—as well as some large public systems like the City University of New York (CUNY)—continue to examine learning directly. While

1 For a full report, see *Measuring Up on College-Level Learning* at http://www.highereducation.org/reports/mu_learning/index.shtml.

2 Kentucky, a National Forum demonstration state, also participated in the 2003 SAAL.

3 Justin D. Baer, Andrea L. Cook, and Stéphane Baldi, The Literacy of America's College Students (Washington, D.C.: The National Survey of America's College Students, American Institutes for Research, January 2006).

THE LEARNING MODEL

The Learning category is constructed as the other five performance categories of *Measuring Up* have been, with indicators that are grouped in three overall themes, each of which is weighted (see parentheses) and reflects a particular dimension of state performance:

1. **Literacy Levels of the State's Residents (25%).** This cluster of indicators examines the proportion of college-educated citizens who achieve high levels of literacy. It directly addresses the question, "What are the abilities of the state's college-educated population?" originally posed in *Measuring Up 2000*.

   For *Measuring Up 2006*, the data are drawn from the State Assessment of Adult Literacy (SAAL) administered to adults with an associate's or a bachelor's degree. The SAAL was administered in five states in 2003—Kentucky, Maryland, Massachusetts, Missouri, and New York—in parallel with the National Assessment of Adult Literacy (NAAL). The SAAL poses real-world tests or problems that require respondents to read and interpret texts (prose), to obtain or act on information contained in tabular and graphic displays (document), and to understand numbers and graphs, and perform calculations (quantitative).

2. **Graduates Ready for Advanced Practice (25%).** The indicators in this theme reflect the contributions higher education makes to a state's stock of "educational capital" by examining the proportion of the state's two-year and four-year college graduates who are ready for advance practice in the form of professional licensure or graduate study. It addresses *Measuring Up 2000*'s policy question, "To what extent do colleges and universities in the state educate students to contribute to the workforce?"

   For *Measuring Up 2006*, the measures are based on the number of college graduates within each state who have demonstrated their readiness for advanced practice by a) taking and passing a national examination required to enter a licensed profession such as nursing or physical therapy, b) taking a nationally recognized graduate admissions exam like the Graduate Record Examination (GRE)[4] or the Medical College Admissions Test (MCAT) and earning a nationally competitive

such examination results cannot be benchmarked to other states and may be used to ground questionable comparisons among institutions with quite different missions, the basic intent of such efforts is admirable. Meanwhile, states like Virginia and Utah—among many others—continue to encourage institutions to assess learning locally against commonly stated outcomes in key categories such as communication and critical thinking. Institutional efforts to assess learning and publicly report results are being further reinforced by regional accrediting organizations as well as by the public commitments to assess learning made by institutional membership organizations such as the National Association of State Universities and Land-Grant Colleges (NASULGC) and the American Association of State Colleges and Universities (AASCU). These are clear signs of progress and they should be justly recognized.

But there are major challenges ahead. When the National Forum convened in 2001 to consider how *Measuring Up* might incorporate Learning assessments, it concluded that the best immediate course was to exploit existing measures. The Learning model used in *Measuring Up 2004* and extended in this edition is consistent with this advice. But this by no means implies that these measures are the best we can ultimately get. Indeed, the conceptual categories that define the model can accommodate far better data. For example, the 2003 NAAL provides the basis for an updated national benchmark in "Literacy Levels of the State's Residents." But future administrations of this important assessment ought to be based on sample sizes that allow credible state-level estimates, and more states should participate in SAAL. In addition, it is especially unfortunate that we have had to wait for more than a decade for the update on the nation's literacy that NAAL provides.

4 The National Center is grateful to Kurt Landgraf, President of the Educational Testing Service (ETS) for making state-level GRE scores available for the first time.

Licensure and graduate admission examination results—now available in the aggregate for all 50 states—enable full calculation of "Graduates Ready for Advanced Practice." But not all graduates take such examinations, and indirect estimates such as these will always be affected by unknown factors determining who takes such tests in each state.

Results for "Performance of College Graduates" depend on the availability of suitable assessments and sufficient investments in state-level data collection to ensure that results are robust and reliable. The Collegiate Learning Assessment (CLA) administered to four-year students and ACT, Inc.'s WorkKeys assessments administered to two-year students in 2004 were among the best of their kind then available. But assessment technology will continue to develop and should be exploited. More authentic and comprehensive assessments—ideally constructed to examine how much students have *grown* during the college experience—are badly needed. Equally necessary are incentives for states and institutions to participate in such efforts and use their results honestly.

The principal goal of the National Forum's five-state demonstration project on Learning, reported in *Measuring Up 2004* and extended here, was to prove the feasibility of this approach. We now face the far more serious long-term task of filling out the model with constantly improving measures, administered to increasingly larger samples of students and citizens, and extended to all 50 states.

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THE LEARNING MODEL *(Continued)*

score, or c) taking and passing a teacher licensure examination in the state in which they graduated college. Each of these measures is presented as a proportion of the total number of bachelor's and associate's degrees granted in the state during the same time period.

3. **Performance of College Graduates (50%).** This cluster of indicators focuses on the quality of the state's higher education "product" by addressing the all-important question, "How effectively can graduates of two- and four-year colleges and universities in the state communicate and solve problems?"

   Measuring Up 2006 presents the same results that were presented in *Measuring Up 2004* for the five states that participated in the National Forum on College-Level Learning's demonstration project: Illinois, Kentucky, Nevada, Oklahoma, and South Carolina. The measures used consisted of two sets of assessments, the Collegiate Learning Assessment (CLA) for four-year institutions, and the ACT WorkKeys assessment for two-year colleges. The CLA is an innovative exam that goes beyond multiple-choice testing by posing real-world tasks that a student is asked to understand and solve. For example, students could be asked to draw scientific conclusions from a body of evidence in biology or examine historical conclusions based on original documents. They might be asked to prepare a persuasive essay, in which they analyze and refute a written argument by means of logic and evidence. The ACT WorkKeys assessment examines what students can do with what they know. Items that assess reading comprehension and skills in locating information, for instance, might require students to extract information from a document or a set of instructions; questions in applied mathematics might test their ability to use mathematical concepts and skills such as probability or estimation in real-world settings. The WorkKeys writing assessment requires students to prepare an original essay in a business situation.

In order to evaluate state performance, the values for each indicator within these three themes are compared to a common standard. The standard used for *Measuring Up 2006* is the national average on each measure.

WHAT'S NEW IN *MEASURING UP 2006*?

As with previous editions of *Measuring Up*, the 2006 state report cards provide the general public and policymakers with objective information about their state's performance in higher education. This year, state performance is assessed in three separate ways:

1. Graded Information

Each state's current performance is compared with that of the best-performing states, and the results are indicated in letter grades. The Affordability category is the exception —in this category, the state's current performance is compared with the performance of the best states in the early 1990s.

2. Change in Graded Measures

Each state's current performance is compared with its own performance in the early 1990s. Progress, lack of progress, or a decline experienced by the state since then is indicated by an arrow pointing up, sideways, or down.

3. International Comparisons

Measuring Up 2006: The National Report Card on Higher Education highlights how the United States compares with other countries in providing educational opportunity and on degrees awarded. Individual state report cards compare each state's performance with international data on college participation, degree or certificate completion, and the level of adult educational attainment.

International Comparisons

Measuring Up 2006 is the first edition that provides international comparisons for the nation as a whole and for all 50 states.

As with all data in *Measuring Up*, international measures are based on the most current data available. For all international comparisons, data were drawn from the Organisation for Economic Co-operation and Development (OECD). For more information about data sources and international measures, see *Measuring Up Internationally: Developing Skills and Knowledge for the Global Knowledge Economy*, by Alan Wagner (available at www.highereducation.org).

Improvement in Indicators

The data behind the persistence indicators in the Completion category have improved since the last edition of *Measuring Up*. These indicators measure the percentage of first-year students returning for a second year at two-year or four-year colleges and universities. Previously, these measures relied on the ACT, Inc. annual survey of colleges and universities to estimate the first-year to second-year persistence rates for first-time, full-time students in each state. A new data source, however, recently became available—the Integrated Postsecondary Education Data System (IPEDS) enrollment survey by the U.S. Department of Education. With this new data source, state-level persistence rates are more reliable because they are reported by nearly all institutions of higher education in the nation. Also, persistence rates now include both part-time and full-time students, making state assessments more comprehensive.

Learning Category

In the Learning category, *Measuring Up 2006* is the first edition that provides data 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" indicator).

In *Measuring Up 2006*, as with the 2004 edition, most states 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. For more information, see "Grading Learning: Progress and Prospects," by Peter Ewell, on page 23.

Additional information about each of these changes can be found in the *Technical Guide for Measuring Up 2006* at www.highereducation.org. Comprehensive, individual state report cards are also available on the Web site.

QUESTIONS AND ANSWERS ABOUT *MEASURING UP 2006*

Who is being graded in this report card, and why?

Measuring Up 2006 grades states, not students or 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 education 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. In addition, state economic development policies influence the income advantage that residents receive from having some college experience or a college degree.

Why is a state-by-state report card needed for higher education?

Measuring Up provides the general public and policymakers with objective information they need to assess and improve higher education. After the publication of *Measuring Up 2000* six years ago, states could evaluate and compare performance in higher education within a national context for the first time. The report cards were developed as a tool for fostering improvement in policy and performance.

What factors are considered when grading states?

The report card grades states in six performance categories: Preparation, Participation, Affordability, Completion, Benefits, and Learning.

Preparation: How adequately does each 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?

How are states graded?

States receive letter grades in each performance category. Each category consists of several indicators, or quantitative measures—a total of 35 indicators in the first five categories. Grades are calculated based on each state's performance on these indicators, relative to the best-performing states. For more information, see "How We Grade States" on page 30.

For the sixth category, Learning, most states receive an "Incomplete" because there is not sufficient information about student learning for meaningful state-by-state comparisons. *Measuring Up 2006*, however, gives a "Plus" to nine states that are actively working to measure and assess learning 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. For more information about measurement within the Learning category, see "Grading Learning: Progress and Prospects," by Peter Ewell, on page 23.

What information is provided but not graded?

Each of the 50 state report cards presents important information that is not graded, either because the information, though important, is not based on performance outcomes, or because data are not available for enough states. For example, the state report cards highlight important gaps in college opportunities for various income and ethnic groups. The state report cards also provide information on improvements and setbacks in each state's performance over time. Other contextual information is also presented that illustrates the unique environment in each state, such as demographic changes, student migration data, and state funding levels for higher education. *Measuring Up 2006* is the first edition to provide international comparisons that offer important information about how well the 50 states and the nation are preparing residents with the knowledge and skills needed to compete in a global economy. International comparisons provide new contextual information for states.

What sources of information are used to determine the grades?

All data used to grade states in *Measuring Up 2006* were drawn 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 (in most cases from 2004 or 2005), are in the public domain, and were collected in ways that allow meaningful comparisons among the states. For more information on data sources used in *Measuring Up 2006*, see the *Technical Guide for Measuring Up 2006* at www.highereducation.org.

Does the report card grade on a curve?

No. Grades are calculated by comparing each state to the best-performing states for each indicator.

What grading scale is used?

As shown in "How We Grade States" (see page 30), letter grades are based on the familiar 100-point scale: An "A" represents a score of 90 or above, and an "F" represents a score below 60.

Does the report card use data unique to a particular state?

Measuring Up 2006 only uses data that are comparable across states. As a result, some states may find that their own internal data present a fuller picture of the state's strengths and weaknesses in higher education. The National Center encourages states to add their own data to the report card's categories to create a more detailed picture of state performance.

What happens if data are missing for a state?

When information is not available on a particular indicator, we assume, for the purposes of grading, that a state is doing no better or worse on that particular indicator than it is on the other indicators in that performance category. However, the report card uses the most recent data available. In the event that a state has data that were available in time for the 2004 edition of *Measuring Up* but not for the 2006 edition, the data from *Measuring Up 2004* are used again in this edition, since they are the most recent data available for state-by-state comparisons.

To what extent do the grades reflect the wealth or the race and ethnicity of the state's population?

An independent analysis of *Measuring Up* data showed that factors like wealth and economic vitality had about a 25% influence on grades, and that race and ethnicity had about a 10% influence on grades. For more information, see *A Review of Tests Performed on the Data in Measuring Up 2000*, by Peter Ewell, available at www.highereducation.org.

How does the report card account for the migration of people across state lines?

Migration affects two of the performance categories: Participation and Benefits. One of the indicators in the Participation category accounts for the migration of young people, but the indicator in the Benefits category does not, due to limitations in national data collection. In the Participation category, please see the net migration of students reported in the "Other Key Facts" section of the state report cards. In the Benefits category, states receive credit for having an educated population since states reap the economic and societal rewards regardless of where its residents received their education. With the exception of the Benefits category, all other graded performance categories recognize states for developing rather than importing talent.

How frequently are the report cards published?

The report cards are published every two years. Previous report cards were published in 2000, 2002, and 2004.

Why does *Measuring Up 2006* include international indicators?

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.

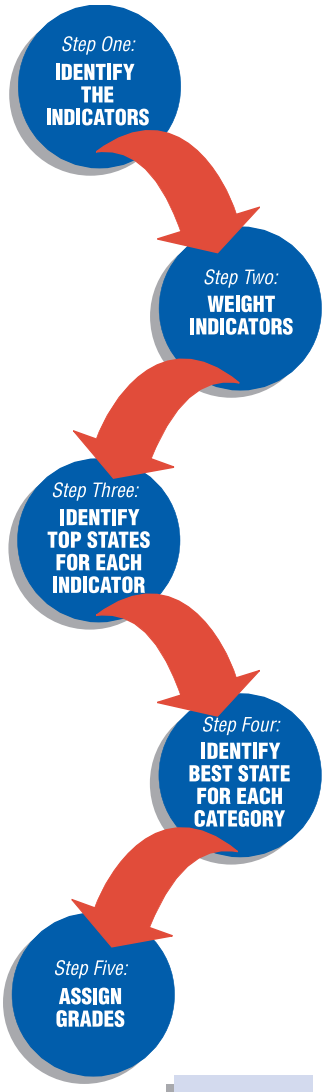
For more information on international comparisons, see *Measuring Up Internationally: Developing Skills and Knowledge for the Global Knowledge Economy*, by Alan Wagner. For more information on available data sources, see the *Technical Guide for Measuring Up 2006*. Both documents are available at www.highereducation.org.

How can I find out more about the report card or my state's performance?

Visit the National Center's Web site at www.highereducation.org to:

- Download state report cards and the national report card.
- Compare any state with the best-performing states in each performance category.
- Compare states' grades and indicator results in each performance category.
- Compare states' other key factors (such as demographic indicators and higher education appropriations).
- Identify gaps in state performance for ethnic and income groups.
- Link directly to the sources that gathered the data.
- Obtain technical information and sources for indicators, weights, and calculations.
- Find out more about the National Center for Public Policy and Higher Education.

HOW WE GRADE STATES



A = 93 and above
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 = Below 60

State grades (A, B, C, D, or F) in the five performance categories are based on each state's performance relative to other states.

Step 1. Identify the indicators

Indicators, or measures, are selected for each performance category: preparation, participation, affordability, completion, and benefits. All indicators used in *Measuring Up*:

- are important in assessing performance in the category,
- are collected regularly by reliable, public sources that follow accepted practices for data collection,
- are comparable across the 50 states, and
- measure performance results.

Step 2. Weight indicators

Each indicator is assigned a weight based on its importance to the performance category. For each category, the sum of all weights is 100%.

Step 3. Identify top states for each indicator

State results, or raw scores, on each indicator are converted to an "index" scale of 0 to 100, using the performance of the top five states as the benchmark. This establishes a high, but achievable standard of performance. Beginning with *Measuring Up 2004*, the performance of the top five states in the early 1990s sets the benchmark for the current performance in the affordability category. All other categories continue to use the top five states in the current year.

Step 4. Identify best state for each category

State scores for each category are calculated from the state's results on the indicators and the indicators' weights. In each category, the sum of all the index scores on the indicators is converted to a scale of 0 to 100, based on the performance of the top state in the category.

Step 5. Assign grades

Grades are assigned based on the category index scores, using a grading scale common in many high school and college classes.

HOW WE MEASURE CHANGE OVER TIME

"A National Overview: Improvements, Declines, and Disparities" (see page 11) presents each state's progress in relation to its own performance in the early 1990s.

1. Compare each state's results* on the indicators in *Measuring Up 2006* with its results from the early 1990s.

Each state's results in this report card are compared with its own results from the early 1990s on all indicators for which there are data.

2. Determine whether the state's current performance on each comparable indicator has improved or declined compared with the early 1990s.

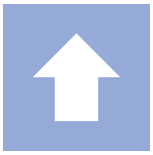
3. In each performance category, identify whether the state has made improvements or not.

With the weights of indicators taken into account,† the state receives one of the following arrows in each performance category:

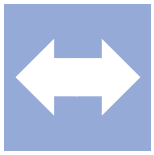
- *Up arrow*: The state has improved on more than half of the indicators in the category.
- *Side arrow*: The state has improved on some, but no more than half, of the indicators in the category.
- *Down arrow*: The state has declined on most or all of the indicators in the category.

For more information about indicators and calculations, see the *Technical Guide* at www.highereducation.org.

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 of the indicators in the category.

* The results, or raw scores, are the numerical values that each state receives on each indicator. (To see how results are converted to grades, see "How We Grade States.")

† Each indicator is assigned the same weight as in grading (see "How We Grade States"). The only exceptions are in those performance categories in which indicators have been added or refined, or in which updated state information is not available; in those cases, the weights are adjusted proportionately.

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Daphne Borromeo coordinated and implemented the National Center's communications plan. Jill De Maria led the production, Web development, quality checking, and editorial processes.

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