

# The Business Leader's Guide to

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## MEASURING UP 2002

THE STATE-BY-STATE REPORT CARD  
FOR HIGHER EDUCATION



# **The Business Leader's Guide to Measuring Up 2002:**

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***The State-by-State Report Card  
for Higher Education***

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To order *Measuring Up 2002*, call 1-888-269-3652. Single copies are available for \$25.00. Or visit [www.highereducation.org](http://www.highereducation.org) to download the entire report.

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# Executive Summary<sup>1</sup>

Over the past century, American higher education has evolved dramatically: once a privilege reserved for the elite, it has become a requirement for the majority. As a result of its new status in the knowledge economy, higher education has entered an era of great opportunity and tremendous responsibility. The nation's social and economic health now hinge on the ability of its colleges and universities to educate many more Americans to a far higher standard than ever before. The business community can play a pivotal role in helping American higher education meet this challenge.

Businesses that undertake higher education improvement initiatives can draw on an invaluable new resource: state-by-state assessments of higher education performance published by the National Center for Public Policy and Higher Education. In late 2000, the National Center released *Measuring Up 2000*, the first in a revolutionary series of state-by-state report cards for higher education.

The second edition, *Measuring Up 2002*, was released in October 2002.

Like its predecessor, *Measuring Up 2002* has assigned all 50 states letter grades for their performance in five categories deemed essential to the quality of higher education in each state: preparation, participation, affordability, completion, and benefits. All 50 states have received "Incompletes" in a sixth category—learning—because the absence of comparable data on what students actually learn in college has prevented the National Center from making meaningful state-by-state comparisons.

Armed with these report cards, business leaders, educators, policy makers, and the general public in any given state can for the first time gain a broad overview of how well their state's higher education system is performing relative to higher education in other states. More to the point, the

## The Goals of this Guide

- To facilitate widespread business awareness of the *Measuring Up* report cards and their significance to the business community
- To make the case for high standards of success in *Measuring Up*'s six performance categories
- To identify ways of using the report cards to mobilize the business community in coordinated initiatives to improve higher education through state-level action
- To promote maximum alignment between higher education improvement initiatives led by business, educators, and policy makers

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<sup>1</sup> Several brief passages in this guide have been liberally adapted from Roberts T. Jones, "Facing New Challenges: The Higher Education Community Must Take the Lead in Addressing the Dramatic Pace of External Change," in *National CrossTalk* 10 (3), summer 2002 (San Jose: National Center for Public Policy and Higher Education).

report cards provide data that can support targeted strategies for change. Where such data are unavailable, the report cards can help business make a strong case for better data collection and disclosure. Moreover, by releasing a new report card every two years until at least 2006, the National Center will create both an incitement to necessary action and an opportunity to track the effects of such action over time.

On a more fundamental level, business leaders, policy makers, and educators can use the report cards to transform the way we judge the quality of higher education. For years, proponents of American higher education cited the merits of particular elite institutions as the measure of the entire higher education system's quality. *Measuring Up*, by contrast, judges the quality of America's higher education system on how well it serves the increasingly diverse educational needs of all Americans, regardless of race, gender, socio-economic condition, age, or employment status. At a time of unprecedented demand for postsecondary education and training, *Measuring Up 2002* has revealed that our higher education system as a whole is not adequately meeting these diverse needs.

This *Business Leader's Guide to Measuring Up 2002* aims to help the business community use the report card series to align its efforts around coordinated strategies for improving the quality and accessibility of higher education. The report cards promise to help the business community gain both a common understanding of current needs and a shared vision of future goals. In doing so, they raise the standards for improvement: while valuable in their own right, business-led initiatives that produce only anecdotal successes will do little to affect overall performance at the state level.

This *Guide* therefore calls for substantial business engagement in higher education initiatives aligned around three guiding principles:

- Initiatives should address problems on multiple fronts.
- Initiatives should have the potential to benefit many different businesses.
- Initiatives should have the potential to benefit all Americans.

These principles inform this *Guide's* nine strategies for establishing higher education improvement initiatives (see sidebar). Given the growing demand for knowledge and skills, such initiatives have become more urgent than ever.

### Strategies for Business Engagement in Higher Education

1. Join forces with other business organizations and education groups
2. Assess national and regional education and workforce needs
3. Formulate clear and attainable goals
4. Conduct a review of relevant state higher education policies
5. Where possible, consider the entire educational continuum from K–12 through higher education
6. Design replicable programs
7. Consider the needs of nontraditional students
8. Support strategies for measuring student learning
9. Exhibit staying power

# The Growing Demand for Higher Education

*The long-term success of American business depends on a robust and universally accessible system of higher education.*

## THE EXPANDING MARKET FOR SKILLS

**T**he ability of American higher education to respond to the changing expectations of the world around it has become crucial to America's social and economic well-being. The business community—operating in an increasingly information-based economy that is demanding a more highly educated citizenry than ever before—has a primary stake in ensuring that American colleges and universities meet this demand. In the 21<sup>st</sup> century, every citizen requires access to high-quality postsecondary education.

Accelerating technological development and global competition are fueling an unprecedented need for people possessing new and higher skills. Over the past half-century, the ratio of unskilled to skilled jobs has shifted dramatically. Between 1950 and 1997, the proportion of American jobs classified as unskilled dropped precipitously from 80% to approximately 15%.<sup>2</sup> More importantly, it is projected to drop still further—to 12%—by 2006.<sup>3</sup> According to Bureau of Labor Statistics projections, 70% of new jobs will require significant postsecondary education.<sup>4</sup> An analysis of such trends has raised serious concerns that Americans as a whole will not be adequately educated to meet the growing educational demands of the 21<sup>st</sup>-century workplace. According to one recent estimate, by 2028 there will be 19 million more jobs than workers sufficiently prepared to fill them.<sup>5</sup>

Businesses have already felt the effects of serious skill deficiencies in the current workforce. During a period of explosive economic expansion in the late 1990s, for example, employers participating in an American Management Association study reported that 40% of job applicants

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<sup>2</sup> Philip R. Day, Jr., and Robert H. McCabe, "Remedial Education: A Social and Economic Imperative," *Issue Paper* (Washington, D.C.: American Association of Community Colleges, October 1997).

<sup>3</sup> Michael Porter and Debra van Opstal, *U.S. Competitiveness 2001: Strengths, Vulnerabilities and Long-Term Priorities* (Washington, D.C.: Council on Competitiveness, 2001).

<sup>4</sup> Bureau of Labor Statistics, *Occupational Outlook Handbook*, 2000–01 edition (Washington, D.C.: U.S. Department of Labor, January 2000).

<sup>5</sup> *Investing in People: Developing All of America's Talent on Campus and in the Workplace* (Washington, D.C.: Business–Higher Education Forum, 2002).

lacked necessary workplace skills,<sup>6</sup> and a full 69% of CEOs surveyed by Coopers and Lybrand cited employee skill deficiencies as a barrier to growth.<sup>7</sup>

The especially pressing shortage of highly skilled information technology workers has prompted American businesses to rely heavily on educated foreign nationals as a means of sustaining their productivity. In the late 1990s, Congress passed legislation enabling rising numbers of temporary, nonimmigrant workers to enter the United States on temporary H1-B visas. Between 1998 and 2000, the annual cap on such workers rose no less than five times, increasing from 65,000 to 195,000.<sup>8</sup>

Such numbers speak volumes about the continuing misalignment between the American educational system and rising skill demands. While the severity of the skill gap has abated during the recent economic downturn, the prospect of sustained future growth might well founder on similar—or even worse—deficiencies.

## REMAINING COMPETITIVE IN THE GLOBAL ARENA

As the global shift from a manufacturing to a knowledge economy continues, those nations with the best-educated citizenry will enjoy a decisive competitive advantage. Countries across the globe are making rapid gains in educational and technological attainment, improving their productivity and thereby increasingly challenging U.S. economic strength. Norway, Britain, and the Netherlands have recently surpassed the United States in the proportions of their populations graduating from college, and other countries are closing in on U.S. levels of educational attainment.

In this new world, market share is moving to countries best able to deliver skilled workers, particularly in the areas of science and technology. The business community has ample cause for alarm when it observes the number of college graduates in high-demand areas such as engineering and science increasing far more quickly abroad than in the United States. According to the National Center for Education Statistics, for example, only 5% of bachelor's degrees awarded in the U.S. are in engineering, compared to 21% of German degrees and 46% of Chinese degrees.<sup>9</sup>

## PREPARING FOR DEMOGRAPHIC CHANGES

In light of rising demand for college-educated citizens, an examination of demographic trends brings both good news and bad news. The good news is that growing numbers of Americans will seek postsecondary education in the coming years. The bad news: higher education as currently constituted may well prove unable to accommodate these prospective students.

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<sup>6</sup> American Management Association, [http://www.amanet.org/research/pdfs/bjp\\_2001.pdf](http://www.amanet.org/research/pdfs/bjp_2001.pdf).

<sup>7</sup> "Coopers and Lybrand Trendsetter Barometer," 1998, cited in Robert I. Lerman and Felicity Skidmore, *Helping Low-Wage Workers: Policies for the Future* (Washington, D.C.: Urban Institute, 1999), <http://www.dol.gov/asp/programs/history/herman/reports/futurework/conference/low-wage.htm>.

<sup>8</sup> Milton Goldberg and Susan L. Trainman, "Why Business Backs Education Standards," *Brookings Papers on Education Policy, 2001*, ed. Diane Ravitch (Washington, D.C.: Brookings Institution Press, 2001), 84.

<sup>9</sup> National Science Board, *Science and Engineering Indicators, 2000* (Arlington, VA: National Science Foundation, 2000, NSB-00-01), appendix table 4-20.

As enrollments grow larger and more diverse, American higher education will confront growing barriers to ensuring universal access to college. Current projections of enrollment growth are startling. By 2011, the vast majority of recent high school graduates will seek significant postsecondary education and training, contributing to a projected 20% jump in college enrollments over the next decade.<sup>10</sup> Not included in these projections is the substantial and rising share of working adults who will return to higher education repeatedly throughout their careers. These trends threaten to overwhelm already strained funding mechanisms, potentially shutting the doors to college for thousands of eligible students.

The success of American higher education will be judged in part on its ability to serve growing minority populations. While college attendance among minorities has been on the rise, it still lags far behind the rate for white students. Absent a significant change in current trends, moreover, the number of minorities attending college in 2015 will remain disproportionately small.<sup>11</sup> The commitment to ensuring minorities the same educational opportunities their white counterparts enjoy has always been a moral imperative. Because minorities will comprise a large and growing share of the workforce, this commitment has become an economic imperative as well.

## **BEST IN THE WORLD? CREATING A NEW STANDARD OF QUALITY**

Americans and non-Americans alike have long described the U.S. system of higher education as “the best in the world.” Given the dramatic changes confronting this system, however, the time has come to redefine what it means to be the best. When prosperity depended largely on the unskilled labor that fueled the manufacturing economy, the existence of a few prestigious research universities was sufficient to secure the preeminence of American higher education. Significant gains in educational access achieved by the G.I. Bill after World War II and the expansion of the community college system some 20 years later have done little to shift this focus from elite institutions.

At a time of unprecedented demand for widespread access to postsecondary education, the accomplishments of individual colleges or universities cannot serve as a measure of the entire system’s quality. Patrick Callan, president of the National Center for Public Policy and Higher Education, has formulated this point in compelling terms:

The reputation of American higher education as “the best in the world” is derived from that of a few elite institutions and from the research contributions of a small number of universities. This reputation has little to do with higher education as most Americans experience it.<sup>12</sup>

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<sup>10</sup> National Center for Education Statistics, *Projection of Education Statistics to 2011* (Washington, D.C.: U.S. Department of Education, October 2001).

<sup>11</sup> Anthony P. Carnevale and Richard A. Fry, *Crossing the Great Divide: Can We Achieve Equity with Generation Y?* (Princeton: Educational Testing Service, 2000), 10.

<sup>12</sup> Patrick Callan, “Introduction,” *Measuring Up 2002: The State-by-State Report Card for Higher Education* (San Jose: National Center for Public Policy and Higher Education, 2002), 15.

Educators, policy makers, and business leaders will have to divert their attention from particular institutions to the rapidly changing populations those institutions must serve.

The long-established emphasis on the reputation of individual institutions is especially inappropriate in this era of lifelong learning. In the course of their careers, Americans will move between jobs, technical schools, two-year colleges, and four-year colleges, often assembling disparate courses and learning experiences into recognized credentials. Driven in large part by the growing skill requirements of an increasingly dynamic labor market, the demand for such frequent and varied lifelong learning opportunities does not respect institutional or curricular boundaries. Americans will increasingly judge the quality of their higher education system on its ability to facilitate these learning opportunities, regardless of where or when.

As it strives to remain competitive in a world that is evolving quickly, the business community must promote the ability of American higher education as a *whole* to serve the increasingly diverse needs of a larger and far less homogenous population.

# Why Measuring Up?

*The Measuring Up report card series offers business the first large-scale, detailed picture of how well American higher education is meeting external demands. More to the point, the report cards provide data that can support targeted strategies for change. In presenting such information, the report cards can serve as invaluable tools for galvanizing and aligning business initiatives to improve higher education at the state level.*

*Measuring Up 2002* comes at a crucial time: faced with an unprecedented need for more highly educated employees, businesses can no longer be content with programs that produce anecdotal success in isolated institutions. By assessing statewide performance in higher education, *Measuring Up 2002* focuses attention squarely where it belongs: on the educational opportunity states provide to all of their residents. In doing so, it adopts a broad definition of higher education as “all education and training beyond high school, including all public and private, two- and four-year, nonprofit and for-profit institutions.”<sup>13</sup> By using the report card as a guide, businesses can focus their energies on the kinds of initiatives that promise to benefit the greatest number of people across any given state.

## THE IMPORTANCE OF THE STATES

**B**y directing the business community’s attention to the state level, moreover, the report cards can help business to apply its efforts where they can have the most immediate impact. States hold a central responsibility for setting public policy on higher education. They exercise a pervasive influence on the funding levels of public and private institutions; eligibility requirements for financial aid; the statewide mix of available educational programs; the respective missions and academic concentrations of their various public institutions; and a host of regulations on important matters of institutional governance. As the first report card has revealed, every state’s higher education system has distinct needs for improvement. Each successive report card promises to help business remain attentive to how state policies can address these particular needs.

## THE URGENCY OF ACTING ON THE REPORT CARD’S FINDINGS

The results published in *Measuring Up 2002* underscore the urgency of bringing business leaders to the table with educators and policy makers in a concerted effort to improve the performance of their state’s higher education system. The report card demonstrates that American colleges and

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<sup>13</sup> *Measuring Up 2002*, 20.

universities continue to fall short of current expectations. No state excels in all the report card's performance categories, and in fact many perform poorly across the board. At a time when both personal and national prosperity depend more than ever on the equitable distribution of educational opportunity, we cannot allow access to high-quality learning to remain an accident of birth or geography.

By shining a light on the six performance categories, *Measuring Up* can help the business community target areas of particular concern. Taken together, preparation, participation, completion, and affordability determine how many students will reach high levels of postsecondary achievement. The benefits category measures the intellectual capital businesses can draw on as they strive to remain competitive in a global economy. Finally, the learning category addresses an issue of central importance to the business community: because skill requirements are changing at an accelerating rate, employers need more reliable and descriptive measures of what students actually learn in college. As technology and global competition raise the stakes of each hiring decision, business simply cannot rely on formal credentials as a surrogate for knowledge and skills.

The absence of comparable data on student learning outcomes prompted the National Center to assign all 50 states an "Incomplete" in the learning category. Given the importance of clearly communicated learning outcomes, this lack of data gives business special cause for alarm. It also provides a compelling case for action.

### **The Six Performance Categories**

*Preparation* measures how well a state's K–12 schools prepare students for college-level education and training.

*Participation* addresses the opportunities for state residents to enroll in higher education.

*Affordability* measures whether students and families can afford to pay for higher education, given income levels, financial aid, and tuition levels at the colleges and universities in the state.

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

*Benefits* includes the economic and societal benefits that the state receives as the result of having well-educated residents.

*Learning* is intended to address the level of educational capital that states possess as a result of their policies for education and training beyond high school.

Source: Adapted from "Questions and Answers about *Measuring Up 2002*," *Measuring Up 2002*, 19.

## **THE NEED FOR DATA-DRIVEN IMPROVEMENT STRATEGIES**

Such deficiencies in data reveal a great deal about the limits of current efforts to improve higher education for all Americans. Without reliable and widely comparable data on higher education's performance, policy makers cannot evaluate needs for improvement or effect necessary changes. Business, therefore, has a vital interest in redressing the report card's deficiencies in data, as well as in acting on performance data currently available.

Businesses commonly use data to drive improvements in their own products, services, or organizational practices. The process of such data-driven improvement strategies has become familiar: use data to identify a problem; design targeted strategies for improvement; implement

those strategies; collect data on their effectiveness; and make appropriate adjustments on the basis of these new data.

As vocal proponents of reform in elementary and secondary education, business leaders have long insisted on the importance of such a process to any strategy for improving American schools. Due in part to the business community's efforts, data collection and disclosure have become central to the sweeping elementary and secondary education reforms set forth in the *No Child Left Behind Act*, which became law in November 2001.

The National Center's report cards have begun to meet a similar need for data collection and disclosure in higher education, while highlighting areas in which the states must collect better, more complete data. By gauging state performance every two years, moreover, the report cards enable each state to track the progress of their own improvement efforts.

Because statewide assessments of higher education will not register token improvements in a single area or institution, *Measuring Up* has raised the bar for new higher education initiatives. While the report cards can serve as an essential tool for improving the educational opportunities for all Americans, they will realize their greatest value only if the business community joins forces with educators and policy makers to effect far-reaching improvements.

### **Understanding the Letter Grades: Is an "A" Good Enough?**

The report cards measure each state's performance relative to that of other states. The states that perform best in any given category receive an "A" and serve as benchmarks for all other states. States that compare favorably with these benchmarks receive high grades; those that do not receive lower grades.

By assigning all 50 states letter grades in the different performance categories, *Measuring Up* highlights current disparities in educational opportunity from one state to the next. In an increasingly global economy where the growing need for college-educated citizens crosses local and state boundaries, anyone with a stake in a state's social or economic health cannot tolerate such disparities. A low grade should therefore serve as a goad to action.

Is a high grade, by contrast, cause for complacency? Certainly not. While states may well have reason to be proud of an "A" in any given category, they must bear in mind that the final measure of quality lies in their ability to meet external demand for higher education, rather than in their superiority to other states. In some cases, an "A" might not be good enough. Business leaders must help educators and policy makers look beyond the grades. They must examine the report card's data in light of current and projected need for knowledge and skills.

# Measuring Up's Six Performance Categories: A Closer Look

**T**he *Measuring Up* report card series presents a broad picture of how well each state's higher education system is performing in six essential categories. Before they can act on the information the report cards provide, however, business leaders, educators, and policy makers need to gain a more detailed understanding of each performance category. They must examine the social and economic context that lends each category's data their fullest significance, as well as the data's implications for future workforce development trends.

In some instances, a fuller understanding of this context and these implications might compel the business, education, and policy communities to address gaps in available data. In others, it will help business leaders to use current data in constructing more effective improvement initiatives.

In the interest of fostering such an understanding, the following pages offer a brief discussion of each performance category. While this discussion is by no means exhaustive, it should offer business a preliminary framework for further exploration.

## **Snapshot: Criteria for Grading Preparation**

### *High School Completion (20% of final grade)*

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

### *K–12 Course Taking (40% of final grade)*

9<sup>th</sup> to 12<sup>th</sup> graders taking at least one upper-level math course

9<sup>th</sup> to 12<sup>th</sup> graders taking at least one upper-level science course

8<sup>th</sup> grade students taking algebra

12<sup>th</sup> graders taking at least one upper-level math course

### *K–12 Student Achievement (40% of final grade)*

8<sup>th</sup> graders scoring at or above "proficient" on the national assessment exam:

in math

in reading

in science

in writing

Low-income 8<sup>th</sup> graders scoring at or above "proficient" on the national assessment in math

Number of scores in the top 20% nationally on SAT/ACT college entrance exam per 1,000 high school graduates

Number of scores that are 3 or higher on Advanced Placement subject test per 1,000 high school juniors and seniors

## 1. Preparation: How adequately are students in each state being prepared for education or training beyond high school?

### *The Impact of K–12 Preparation on Higher Education*

The preparation category measures the performance of each state's K–12 system. The National Center has based each state's preparation grade on a combination of high school completion rates, K–12 course-taking data, and K–12 student achievement data. Such data have a significant impact on every state's higher education system. While high school completion is of course a prerequisite for

#### **P–16: Breaking Down the Boundaries Between K–12 and Higher Education**

A growing number of education stakeholders argue that all education—including early education, K–12 education, and postsecondary education—must form a seamless continuum extending from pre-school to the end of college. These advocates of “P–16 education” point to the troubling consequences of the prevailing tendency to treat K–12 and higher education as entirely distinct systems. The lack of alignment between the systems frequently leads to gaps in preparation: students who easily fulfill high school exit requirements may well find themselves ill-equipped for college. Moreover, the current division between schools and colleges often pits these institutions against each other by forcing them to compete for the same resources.

Supporters of P–16 education envision a less fragmented educational governance structure, one that encourages greater coordination not only between K–12 and higher education leaders but also between different sectors of the postsecondary system: two-year and four-year institutions; public and private colleges; for-profit and not-for-profit institutions. A P–16 system promises to create less disruptive transitions between different educational levels while ensuring that a larger share of American students extend their education beyond high school.

The P–16 concept is quickly gaining ground nationwide. Over half of all states have P–16 coordinating bodies, and more are on the way. For more information on P–16 collaboration, including a list of these coordinating bodies, please visit the Education Commission of the States Web site at [www.ecs.org](http://www.ecs.org).

enrolling in the vast majority of postsecondary institutions, extensive research suggests that success in rigorous high school courses, as well as demonstrated proficiency in national assessments and college entrance examinations, are solid predictors of persistence and success in higher education.

The high proportion of postsecondary students who take remedial courses attests to the failure of the K–12 system to equip many students for the rigors of a college education. According to the National Center for Education Statistics (NCES), for example, a full 30% of first-time freshmen in 1995 required remediation in mathematics, reading, or writing.<sup>14</sup> Although such remediation is comparatively inexpensive, it does cost many students time, often slowing or even stalling their progress toward important certificates or degrees.

<sup>14</sup> Quoted in Ronald Phipps, *College Remediation: What It Is, What It Costs, What's at Stake* (Washington, D.C.: Institute for Higher Education Policy, 1998), vii.

## ***The Responsibility of Higher Education for K–12 Preparation***

In recent years, a growing number of educators, business leaders, and policy makers have insisted that higher education share some of the blame for ill-prepared students. They argue that colleges and universities have a responsibility to help elementary and secondary schools prepare students for postsecondary study. For example, the higher education establishment can play a much larger role in defining what students should know and be able to do to succeed in college.

Higher education can also do more to enhance teacher quality. America's colleges and universities have come under mounting scrutiny for their record in teacher education. According to Vartan Gregorian, president of the Carnegie Corporation of New York, "They demean the teaching profession by not providing prospective teachers with the best knowledge of their individual fields, the latest theories of pedagogy, strong skills in technology, considerable classroom experience, and professional mentors."<sup>15</sup>

Research commonly cites poor teacher preparation as a significant cause of unacceptably high attrition rates among teachers. If these rates persist, we will likely be unable to meet the projected demand for over two million new public school teachers over the coming decade.<sup>16</sup> In light of the looming teacher shortage, the need for colleges and universities to offer high-quality teacher preparation programs has assumed particular importance.

### **Snapshot: Criteria for Grading Participation**

#### *Young Adults (60% of final grade)*

High school freshmen enrolling in college within four years in any state

18- to 24-year-olds enrolling in college

#### *Working-Age Adults (40% of final grade)*

25- to 49-year-olds enrolled part-time in some type of postsecondary education

## ***2. Participation: Do state residents have sufficient opportunities to enroll in education or training beyond high school?***

### ***The Need to Accommodate a Wider Diversity of Educational Needs***

The participation category measures the proportion in each state of both young and working-age adults who take part in postsecondary education and training. As the demand for highly educated workers continues to expand in all states, participation rates will become an increasingly important predictor of a state's ability to attract and retain businesses.

Healthy participation rates depend on the ability of higher education to adapt to increasingly complex educational needs. By assessing participation rates among working-age adults as well as young adults, *Measuring Up* draws attention to the emerging needs of one particularly significant group: lifelong learners. Confronted with constantly shifting knowledge and skill requirements, older

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<sup>15</sup> Vartan Gregorian, "Teacher Education Must Become Colleges' Central Preoccupation," *The Chronicle Review*, August 17, 2001.

<sup>16</sup> *A Back to School Special Report on the Baby Boom Echo: No End in Sight* (Washington, D.C.: U.S. Department of Education, 1999).

working adults are attending postsecondary institutions in unheard-of numbers. Driven in part by this growth in lifelong learning, the average age of undergraduates rose to 26 by the year 2000, and the proportion of undergraduates ages 24 or older grew to 43%.<sup>17</sup> A considerable number of college graduates are returning to postsecondary institutions to update their education. According to the American Association of Community Colleges, 28% of students who are enrolled in noncredit courses at community colleges already hold a bachelor's degree or higher.<sup>18</sup>

These data may well under-represent the magnitude of adult learning in America, much of which takes place in courses or institutions for which the Department of Education keeps no statistics. Results from the National Household Education Survey suggest that as many as 90 million adults participated in adult education in 1999, and that almost half of those were taking work-related courses. Only one fifth of the 90 million adult learners were enrolled in programs leading to a formal postsecondary credential.<sup>19</sup> Whether or not these figures are fully reliable, they indicate that both the typical student and the typical course of study have changed dramatically over the past decade.

Many forms of postsecondary learning that do not appear in official statistics can expand educational opportunity and thus contribute to the nation's intellectual capital. Every state's higher education system should therefore offer people a far more varied educational menu than ever before.

### ***The Need for "User-Friendly" Education***

Over the long term, states that promote more "user-friendly" educational options will encourage the broadest participation in higher education. Distance learning technologies offer one means of accommodating students who have been traditionally underserved by colleges and universities. By making education available anywhere and anytime, they can benefit people who cannot travel to physical classrooms, or whose work responsibilities prevent them from attending classes on a fixed schedule. A "one-size-fits-all" approach to higher education will stifle postsecondary participation in an era of increasingly diverse educational needs.

## ***3. Affordability: How affordable is higher education for students and their families?***

### ***A Crisis in Affordability***

The capacity to expand participation in higher education hinges on the ability to make it affordable for even the lowest-income Americans. Rather than merely measuring state levels of financial aid, therefore, any assessment of affordability must also consider the actual cost of higher education as a share of family income across all socio-economic groups. In assigning grades for affordability, the report cards measure the proportion of family earnings required to pay for expenses at two- and four-year colleges, the average annual loan amount carried by undergraduates, and the amount of state financial aid targeted to low-income families.

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<sup>17</sup> National Center for Education Statistics, *National Postsecondary Student Aid Study* (Washington, D.C.: U.S. Department of Education, 2000).

<sup>18</sup> *Faces of the Future* (Washington, D.C.: American Association of Community Colleges, 2000).

<sup>19</sup> U.S. Department of Education, National Center for Education Statistics, *1999 National Household Education Survey*, quoted in Brian Bosworth and Victoria Choitz, *Held Back: How Student Aid Programs Fail Working Adults* (Belmont, MA: FutureWorks, 2002), 2.

The national picture of college affordability is grim. While average college tuition, measured in constant dollars, has risen almost 110% since 1981, the median family income has risen by only 27% over the same period.<sup>20</sup> Tuition increases have had the most dramatic effects on lower-income students, who must devote an enormous, and growing, share of family income to college expenses. Financial aid has not kept pace with these costs. Barring significant changes, moreover, enrollment increases projected for the coming decade promise only to exacerbate these problems.

The distribution of grades in *Measuring Up 2002* reinforces this bleak picture. While only four states earned A's or B's in affordability, 33 earned D's and F's. According to the report card, "Few states offer both low-priced colleges and significant amounts of financial aid targeted to low-income students and families."<sup>21</sup> Even in the best-performing states, the average annual undergraduate debt burden approached \$3,000.

Several factors contribute to this situation. Since the early 1980s, average college costs at private and public four-year colleges have risen at a rate more than double that of inflation.<sup>22</sup> Tuition increases become especially steep during economic downturns, when college and university administrators attempt to compensate for disproportionately large cuts in state higher education budgets. In addition, the recent shift from need-based grants to merit-based aid and tax incentives does not benefit the lowest-income students. Policies to improve affordability must address all of these factors.

### ***Nontraditional Students Left Out in the Cold***

Federal and state financial aid systems do not support "user-friendly" postsecondary education. Originally designed for full-time students earning four-year degrees in bricks-and-mortar facilities, today's financial aid systems do not serve the growing proportion of postsecondary students who follow alternative paths toward a degree or who receive their education through alternative delivery systems. A report on financial aid and working adults released by FutureWorks in April 2002 has determined that less than 30% of low-income working parents who enroll less than half-time in Title IV postsecondary programs receive financial aid from federal, state, or institutional sources. In

#### **Snapshot: Criteria for Grading Affordability**

##### *Family Ability to Pay (50%)*

Percent of income (average of all income groups) needed to pay for college expenses minus financial aid:

at community colleges

at public four-year colleges/universities

at private four-year colleges/universities

##### *Strategies for Affordability (40%)*

State grant aid targeted to low-income families as a percent of federal Pell Grant to low-income families

Share of income that poorest families need to pay for tuition at lowest-priced colleges

##### *Reliance on Loans (10%)*

Average loan amount that undergraduate students borrow each year

<sup>20</sup> *Trends in College Pricing, 2001* (New York: College Board, 2001).

<sup>21</sup> *Measuring Up 2002*, 26.

<sup>22</sup> *Trends in College Pricing, 2001*.

## **Losing Ground: New Perspectives on the Erosion of College Affordability**

In a May 2002 special report entitled *Losing Ground: A National Status Report on the Affordability of American Higher Education*, the National Center for Public Policy and Higher Education identified five disturbing national trends affecting the affordability of higher education:

1. Increases in tuition have made colleges and universities less affordable for most American families.
2. Federal and state financial aid to students has not kept pace with increases in tuition.
3. More students and families at all income levels are borrowing more than ever before to pay for college.
4. The steepest increases in public college tuition have been imposed during times of greatest economic hardship.
5. State financial support of public higher education has increased, but tuition has increased more.

The fifth trend points to a considerable problem: even increased appropriations to higher education have failed to arrest tuition increases. “These increased appropriations drive up the costs of college for taxpayers, although not always with commensurate improvements in access or educational effectiveness,” the report argues. “During upswings and downturns in the economy, continued public investment in higher education is needed. But even in the best of times, emphasis should be placed on expenditures that are cost-effective, that improve educational outcomes, and that can be sustained in both high- and low-water years.”

The report makes several other compelling recommendations:

- “Every state can and should have its own strategy to enhance college affordability through public college tuition and student financial aid.
- Every state can consider family income levels in the state when establishing or approving tuition policies.
- Every state can ensure that adequate financial aid is provided to the neediest students, particularly when tuition is increased.”

To download or order a copy of *Losing Ground*, visit the Web site of the National Center for Public Policy and Higher Education at [www.highereducation.org](http://www.highereducation.org).

Source: Quotations are from *Losing Ground: A National Status Report on the Affordability of American Higher Education* (San Jose: National Center for Public Policy and Higher Education, 2002), 3–4.

addition, many adult students seek education and training from institutions that do not fall under Title IV of the Higher Education Act. Since these institutions cannot distribute most forms of state and federal student aid, the actual proportion of adult learners who receive no aid is likely much higher.<sup>23</sup>

Because many students enrolled in part-time or distance education programs remain ineligible for state or federal aid, this situation is unlikely to improve any time soon. In fact, current student aid structures might actually hamper the creation of postsecondary programs that serve the needs of nontraditional students. “Educational institutions have had little incentive to create and offer the more accessible and modularized

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<sup>23</sup> Bosworth and Choitz, 4.

programs that working adults need,” the FutureWorks report concludes.<sup>24</sup>

Over the long run, federal and state financial aid strategies that do not acknowledge the mounting need for such educational alternatives will ultimately leave millions of students behind while undermining workforce quality.

#### **4. Completion: Do students make progress toward and complete their certificates and degrees in a timely manner?**

##### ***The Importance of Time-to-Degree***

The completion category measures the percentage of first-year community college and four-year college students returning for their second year; the percentage of first-time, full-time students completing a bachelor’s degree in a timely manner; and the number of certificates, degrees, and diplomas awarded per 100 graduate students. Employers should be concerned not only with the *numbers* of postsecondary credentials conferred, but also with the *time* it takes students to complete these credentials. Given the increasing pace of new labor market demands, the need for many students to complete their degrees in a timely fashion will grow stronger, especially in times of greater prosperity. In high-demand fields such as teaching and engineering, excessive time-to-degree can worsen the labor shortages that threaten this prosperity.

##### ***The Shortage of High-Demand Degrees***

Employers should also look beyond the data in *Measuring Up* to examine not only the number of credentials awarded but also the *kinds* of credentials students earn. Long-term trends reveal that the supply of students educated in certain fields is often surprisingly out of step with demand for graduates in those fields. Between 1985 and 2000, for example, the number of engineering bachelor’s degrees awarded nationwide dropped by 24%; that of mathematics bachelor’s degrees fell by a staggering 30%.<sup>25</sup> These declines persisted at a time when demand for technically trained workers approached historical highs.

#### **Snapshot: Criteria for Grading Completion**

##### *Persistence (20% of final grade)*

1<sup>st</sup> year community college students returning their 2<sup>nd</sup> year

Freshmen at four-year colleges/universities returning their sophomore year

##### *Completion (80% of final grade)*

First-time, full-time students completing a bachelor’s degree within 5 years of high school completion

First-time, full-time students completing a bachelor’s degree within 6 years of college entrance

Certificates, degrees, and diplomas awarded at all colleges and universities per 100 undergraduate students

<sup>24</sup> Bosworth and Choitz, 1.

<sup>25</sup> National Center for Education Statistics, *Digest of Education Statistics, 2000–2001* (Washington, D.C.: U.S. Department of Education, 2001).

## ***Fighting a Culture of Exclusion***

An academic “culture of exclusion” can discourage students from completing postsecondary programs, often exacerbating skills shortages in areas of especially high demand. In science and engineering programs, for example, student attrition rates frequently approach 50%. University policies and practices often contribute to these high levels of attrition. Some academic departments set quotas that prescribe high failure rates, and many reward top-tier professors by giving them small groups of elite students to teach.

Such tendencies reflect a broader philosophy that negatively influences completion rates. A long-standing desire to identify and promote the very best students often diverts attention from a far more critical goal: namely, to maximize the academic achievement of *all* students. If business leaders, policy makers, or educators focus their interest too exclusively on high-achieving students at high-profile institutions, they will do little to improve overall completion rates.

### **Snapshot: Criteria for Grading Benefits**

#### *Educational Achievement (30% of total grade)*

Population ages 25 to 65 with a bachelor's degree or higher

#### *Economic Benefits (25% of total grade)*

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

Increase in total personal income as a result of the percentage of the population with some college (including an associate's degree), but not a bachelor's degree

#### *Civic Benefits (25% of total grade)*

Residents voting in 1998 and 2000 national elections

Of those who itemize on federal income taxes, the percentage declaring charitable gifts

#### *Adult Skill Levels (20% of total grade)*

Adults demonstrating high-level literacy skills:

Quantitative

Prose

Document

## ***5. Benefits: What benefits does a state receive as a result of having a highly educated population?***

### ***Economic Benefits***

The benefits category measures the percentage of a state's population with a bachelor's degree or higher, the economic and civic benefits associated with that state's college-educated adults, and the percentage of adults demonstrating high levels of quantitative, prose, and document literacy. The relevance to employers of economic benefits and adult skill levels is clear. A well-educated state population offers employers higher skills, enjoys a higher average income, and generates greater tax revenues.

### ***Civic Benefits***

The civic benefits of higher education are equally significant. The skills necessary for success in the workplace have converged with those that undergird true civic involvement. Voters need knowledge and

judgment: active participation in democracy today requires a more profound grasp of topics as varied as economic policy, scientific innovation, foreign relations, cultural difference, and health care. The

benefits of higher education include personal, economic, and social well-being, all of which contribute to an environment in which business can thrive.

## ***6. Learning: What do we know about student learning as a result of education and training beyond high school?***

### ***Student Learning Outcomes: What We Don't Know Can Hurt Us***

*Measuring Up 2000* and *Measuring Up 2002* reveal that we in fact know very little about what students learn in their education and training beyond high school. This dearth of information prevented the National Center from establishing measures for comparing performance across the 50 states. As a result, every state received an "Incomplete" in this critical performance category.

The 50 "Incompletes" in learning are especially troubling in light of the category's importance to any coherent assessment of quality in higher education. Quality has long been measured in terms of inputs, such as the number and educational background of faculty, or the number of books in a university library. Unless we evaluate their impact on student learning outcomes, such measures of quality can tell us very little, indeed.

As the ultimate measure of quality, student learning lends the other performance categories their full significance. We cannot truly measure the benefits of higher education without a clear accounting of learning, nor can we determine the ultimate value of high participation rates, high completion rates, or even affordability. High quality and widespread accessibility must become inseparable goals.

Because the new currency of the labor market is demonstrated competencies rather than academic degrees, the deficit of information on what students actually learn in college should worry business leaders, educators, and policy makers alike. We simply cannot gauge how well American higher education is preparing us for the demands of an accelerating knowledge economy.

### ***The Growing Need to Communicate Student Learning Outcomes to Employers***

The assessment of learning outcomes not only helps policy makers evaluate the intellectual capital of their state, but also helps individual employers make important hiring decisions. Businesses cannot take educational quality on faith. Rather, they require a reliable sense of the knowledge and skills prospective employees can bring to the job.

Because skills have replaced materials as an employer's most essential resource, the lack of information on learning threatens to weaken the ability of businesses to meet world-class standards in a competitive global economy. In an environment where people must move freely and efficiently between education and jobs, the clear *communication* of demonstrated learning outcomes is essential to facilitating this movement. The reputation of an institution or degree can no longer serve as a reliable proxy for skills and knowledge. The half-life of a degree's reputation is, in fact, growing

## **Snapshot: Criteria for Grading Learning**



shorter as changes in skill requirements accelerate, and the importance of demonstrating actual competency has increased accordingly.

Driven by rising demand for lifelong learning, the explosion of new postsecondary credentials—including degrees, occupational skills certificates, and short-term diplomas—further heightens the need for demonstrated learning outcomes. Confronted with this confusing array of different credentials from an unprecedented variety of education providers, employers require a standard for distinguishing true quality.

# What Business Can Do

## *A New Level of Business Engagement in Higher Education*

**B**usiness involvement in colleges and universities is by no means new. Business leaders have long served on university boards of trustees, participated in college and university capital campaigns, and endowed scholarships. Companies have underwritten campus construction projects, partnered with community colleges to develop employee training programs, or helped staff committees to review the development of new technical curricula. This involvement is truly laudable, insofar as it has benefited individual institutions, businesses, and students.

Despite their value, however, such relatively limited efforts alone will not bring about widespread improvements in the quality and accessibility of higher education. According to an American Electronics Association (AeA) report on higher education in Washington State, “Business support for higher education has been very useful and highly valued by recipients in many instances. It has also been diffuse and unfocused. Most importantly, it has not resulted in any significant improvement in the overall workforce shortage.”<sup>26</sup>

By assessing statewide performance rather than anecdotal improvements, *Measuring Up* has set a new standard for success for higher education. In doing so, they have brought new opportunities and challenges to light. Now that business has a better, more complete vision of how much it needs to achieve in the coming years, it cannot remain content with episodic victories.

The following pages offer some general principles for more coordinated business engagement in higher education, along with a number of strategies for implementing initiatives that satisfy these principles. In addition, they present examples of current or recent business-led higher education initiatives that demonstrate these strategies. The fact that most of these initiatives are too new to yield much data on their own effectiveness attests to just how recent this type of business engagement in higher education really is—and just how much work remains to be done. That said, they can serve as models for businesses that seek to help higher education measure up to 21<sup>st</sup> - century demands.

## **PRINCIPLES FOR ACTION**

When designing new initiatives to address the looming shortage of college-educated Americans, businesses should ask themselves some fundamental questions:

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<sup>26</sup> “Higher Education in Washington State” (Redmond, WA: AeA Washington Council, 1999), 3.

- *Does the initiative address problems on multiple fronts?*

Because *Measuring Up's* performance categories are so interdependent, business should avoid treating them in isolation from one another. For example, projects that seek to increase participation and completion rates might address the issues of affordability and preparation as well. By taking such interrelationships into account, business leaders, educators, and policy makers can formulate effective solutions to systemic problems.

- *Can the initiative benefit many different businesses?*

Businesses that engage in the most effective higher education initiatives will likely help to educate their competitors' employees. Yet, as one higher education official has observed, "a rising tide lifts all boats." Programs intended to increase our overall store of intellectual capital will benefit all businesses in the long run. By transcending the particular concerns of one business or even one industry, such programs can help equip a broader segment of the population with a stronger overall academic foundation and thus better prepare the workforce as a whole for the inevitable changes that lie ahead.

- *Can the initiative benefit all Americans?*

As more and more businesses compete for an elite group of students, more will have to face the consequences of the impending skills gap. To expand the base of Americans possessing necessary knowledge and skills, business must promote much broader access to higher education among people of every age group, race, and socio-economic background. Where possible, business/higher education initiatives should consider the full range of postsecondary institutions that serve diverse educational needs: public and private, two-year and four-year, for-profit and not-for-profit institutions. Inordinate attention to one institutional type or delivery mechanism may simply alter the balance of power among institutions without increasing the aggregate educational benefit to all Americans.

## **STRATEGIES FOR BUSINESS ENGAGEMENT**

### ***1. Join forces with other business organizations and education groups***

Collective action will always have a greater impact than actions taken in isolation. By joining with other business and education groups, businesses can:

- Avoid duplicating the efforts of others;
- Support worthwhile initiatives already in progress;
- Expand the reach and impact of their own proposed initiatives;
- Gain access to funding sources otherwise unavailable to them;
- Gain access to larger communications structures for broader public outreach; and
- Present a united front to legislators and policy makers.

A diverse group of business organizations has already launched higher education initiatives. This group includes:

- *Industry Associations.* Industry associations such as the Semiconductor Industry Association (SIA) and the American Electronics Association (AeA) are undertaking higher education initiatives in multiple states.
- *Chambers of Commerce.* Chambers of commerce in cities as diverse as Spokane, Washington, and Cleveland, Ohio, have developed higher education policy agendas.
- *Business/Education Coalitions:* A number of state-level business/education coalitions have the sole purpose of addressing higher education issues. These coalitions include, but are not limited to, the Virginia Business/Higher Education Coalition, the New Hampshire Forum on Higher Education, and the Arizona Partnership for Higher Education and Business.

Even business-led organizations that currently sponsor no higher education programs might undertake collaborative higher education projects, given sufficient support from their members. There are, for example, over a thousand business and education coalitions involved in K–12 education reform whose commitment to educational improvement might suit them for work in higher education. (For a list of these coalitions organized by state, please see the *ESEA Toolkit*, published by the National Alliance of Business and the Business Roundtable. The *Toolkit* is available for download at [www.nab.com](http://www.nab.com)).

## 2. Assess national and regional needs

Before embarking on higher education initiatives in any given state, businesses should examine that state’s projected education and workforce needs. *Measuring Up* has already provided one means of evaluating education needs. By providing state-by-state comparisons, the report cards offer a general picture of how well every state can measure up to demands that are increasingly national in scope. Because the forces of technology and global competition do not respect state borders, more and more businesses in different states will have to play by the same rules and therefore advocate for world-class educational opportunities.

That said, businesses in each state can look beyond the data presented in *Measuring Up* to gain a more detailed sense of where they need to target their efforts. Do the participation levels of women or minorities lag behind those of their peers? Are working adults engaging in lifelong learning? Does the state face particularly dire skill

### Joining Forces: Florida’s Business/Higher Education Partnership

Beginning in the mid-1990s, Florida’s Business/Higher Education Partnership brought prominent business and education leaders together to advocate for higher education reforms. The Partnership called on the state to increase funding for higher education, and on postsecondary institutions to use their resources more efficiently. Consisting of 12 private sector CEOs and 12 higher education leaders, the Partnership carried substantial weight with the state legislature. It also coordinated with other major business groups, such as the Florida Chamber of Commerce and the Associated Industries, to ensure that their projects did not compete with one another.

Through sustained effort, the Partnership was able to achieve considerable victories before its recent dissolution. As a result of its work, for example, the resident access grant to native Floridians attending independent colleges rose from \$1,200 to \$2,813 over a period of seven years.

## Assessing Regional Needs: The New Hampshire Forum on Higher Education

A partnership of business, education, and public policy leaders created to improve workforce development through higher education, the New Hampshire Forum on Higher Education began its work with a status report describing the state's economic, educational, and workforce needs. Prepared by Ross Gittel, James B. Carter professor at the University of New Hampshire's Whittemore School of Business, and Brian Gottlob, principal of PolEcon Research, the report reviews:

- "Economic trends and the occupational implications of these trends;
- The sources of New Hampshire's college degree labor force;
- Key factors influencing change in the supply of college graduates in the state; [and]
- Economic and fiscal benefits of increasing the number of college graduates entering New Hampshire's workforce."

In addition to helping policy makers understand the key challenges and opportunities facing higher education, the findings of the report and follow-on analysis have helped guide the Forum's own strategic plan as it pursues its mission "to ensure and grow New Hampshire's prosperity by ensuring a work force of highly-educated and well-trained knowledge workers."\* For more information on the New Hampshire Forum, please contact Kelly Clark at 603-227-5315, or by e-mail at [Kclark@gsmr.org](mailto:Kclark@gsmr.org).

\* *Meeting the Challenge: Higher Education and the New Economy in New Hampshire* (Concord, NH: The New Hampshire Forum on Higher Education, 2001).

deficiencies in particular areas, such as math and science? Some of this more detailed information on each state's performance is available from the National Center's Web site ([www.highereducation.org](http://www.highereducation.org)). Other information may be available from a variety of public and private sources, or through original research.

### 3. Formulate clear and attainable goals

After undertaking an assessment of national and regional needs, business should fashion a clear statement of attainable goals for addressing those needs, together with a reasonable timetable for reaching those goals. While the goals and timetable should be sufficiently ambitious to inspire a concerted effort from all stakeholders, they should, of course, remain manageable. Few of the most pressing educational needs can be fully met in a year or two. Instead, sustained higher education initiatives should establish a sequence of annual goals that can motivate incremental progress toward a broader objective of universal access to quality higher education.

In addition, businesses should set only a limited number of goals for any given year. As Rick Edmonds, the former director of Florida's Business/Higher Education Partnership, observes, "If you have 27 or 55 suggestions, that's a wish list, not an action plan." By establishing a finite number of clearly formulated goals, businesses will find it easier to measure the success of their initiatives.

### 4. Conduct a review of relevant state policies

State policies that influence important matters—such as higher education funding mechanisms, university governance,

institutional missions, and the balance between two- and four-year institutions—can profoundly affect the outcomes of business-led initiatives to improve higher education. Such initiatives can therefore benefit from a general review of current state higher education policies. In some cases, such policy audits might reveal how businesses can design their initiatives to have the greatest possible impact within the prevailing regulatory context. In others, the audits might demonstrate the need to advocate for state policy changes that advance the business community's vision for educational improvement.

**5. Where possible, consider the entire educational continuum from K–12 through higher education**

It has grown abundantly clear that the quality and accessibility of higher education depend in large measure on the quality of the elementary and secondary systems. Students who graduate from high school ill-prepared for the rigors of postsecondary study have a

## **A Selection of Higher Education Improvement Goals**

### ***Arizona Partnership for Higher Education and Business (APHEB)***

- Increase the number of students enrolled in engineering, health care, education, and technology courses at universities and community colleges.
- Increase the number of knowledge graduates in engineering, health care, education, and technology.
- Increase the postgraduate retention of knowledge graduates into Arizona's private and public sectors.
- Increase Arizona's investment in higher education.

For more information on APHEB, please visit [www.apheb.org](http://www.apheb.org), or contact Laraine Rodgers at 602-252-5668.

### ***Texas Engineering and Technical Consortium (TETC)***

- Double the number of electrical engineering and computer science graduates from Texas institutions of higher education.
- Increase collaboration between private companies and universities with electrical engineering (EE) and computer science (CS) departments.

For more information on TETC, please visit [www.tetc.udallas.edu](http://www.tetc.udallas.edu).

### ***Oregon Business Council***

- Oregonians will enjoy access to affordable and outstanding higher education institutions that meet their lifelong learning needs anytime and anywhere.

For more information on the Oregon Business Council, please visit [www.orbusinesscouncil.org](http://www.orbusinesscouncil.org).

### ***American Electronics Association (AeA), Washington Council***

- Develop and implement a statewide long-term plan to increase technology degrees.
- Expand and establish programs to provide adequate capacity in educational institutions to attain 2,200 associate and 4,400 B.S., M.D., Ph.D. degrees in high-tech areas by 2004.
- Attain 3,400 associate and 6,800 B.S., M.S., Ph.D. degrees in high-tech areas by 2008 to reduce critical industry shortages.

For more information on the AeA Washington Council, visit <http://aeanet.org/aeanet/AEACouncils/>.

### **Assessing State Policy: The Arizona Partnership for Higher Education and Business (APHEB)**

Consisting of representatives from the business, education, and policy communities, APHEB has identified existing state policies that undermine its general objective: increasing the number of people who graduate from Arizona's community colleges and universities in areas of high demand. In a recent policy paper entitled *Higher Education Policy in Arizona*, APHEB points to impediments to improved quality and access, including insufficient appropriations, funding from unstable sources, and burdensome state regulation of faculty salaries and tuition levels. APHEB is using the findings of this report to build a case for new funding and regulatory policies that promote its goals. In addition, the policy paper cites *Measuring Up*, both to illuminate Arizona's need for improvement and to identify replicable characteristics of top-performing states.

To download the APHEB policy report, please visit [www.apheb.org](http://www.apheb.org).

far lower chance of persisting in college than do their better-qualified peers.

Many promising business/higher education initiatives therefore include efforts to improve student preparation for college by enhancing higher education engagement in K–12 schools. Some of these initiatives involve the higher education community in the creation of meaningful standards for high school graduation. Others seek to improve schools of teacher education as a means of raising teacher quality. Still others have established college-based institutes to train effective school leaders.

### **Setting High School Standards: The American Diploma Project (ADP)**

A collaborative effort carried out by Achieve, the National Alliance of Business (NAB), the Fordham Foundation, and the Education Trust, the American Diploma Project (ADP) seeks to define the academic knowledge and skills high school graduates need in order to meet the demands of both 21<sup>st</sup>-century jobs and postsecondary education. In an analysis of the transition between high school and college in five states, the Education Trust has revealed considerable gaps between high school exit requirements and college entrance requirements. Using these findings, participating states are creating greater alignment between their K–12 and postsecondary systems. The Education Trust's findings will moreover culminate in a set of academic benchmarks expressing what higher education expects high school graduates to know and be able to do.

This account of higher education's expectations will ultimately be reconciled with employer-recognized benchmarks for high school graduation, benchmarks that are emerging from the National Alliance of Business's study of 21<sup>st</sup>-century workplace demands. The American Diploma project unites higher education and business in a common goal: identifying the academic prerequisites to personal, social, and economic well-being in the coming decades.

To learn more about the American Diploma project, please visit [www.achieve.org](http://www.achieve.org).

## **Improving Public Schools: The Milwaukee Partnership Academy (MPA)**

In 1999, the Milwaukee Private Industry Council and the Metropolitan Milwaukee Association of Commerce joined the Milwaukee higher education and K–12 education communities to form the Milwaukee Partnership Academy for Teacher Quality, a broad initiative designed to equip teachers for the challenges of educating youth in urban Milwaukee. With business support, the University of Wisconsin, Milwaukee (UWM) is working with the Milwaukee Public Schools (MPS) and other local education organizations to improve teaching and learning at the elementary and secondary levels.

A recent UWM publication described some of the Partnership Academy's work: "Experienced MPS teachers are entering UWM classrooms to share their expertise with education students and to be certified as teacher leaders. Field assignments are being integrated into [education] students' coursework much earlier than in the past. Other schools and colleges at UWM are tailoring classes in math, science, the arts, and other areas specifically to teachers."\* By focusing on teacher education, the Partnership Academy has made higher education an integral partner in the improvement of the public schools.

To learn more about the Milwaukee Partnership Academy, please call 414-229-3101 or e-mail [partnership@uwm.edu](mailto:partnership@uwm.edu).

\* "A Special Report: Partnerships in Education," *Research Profile 23* (1), spring 2001 (University of Wisconsin, Milwaukee).

## **Training K–12 Leaders: The Georgia Leadership Institute for School Improvement**

In Georgia, the business, higher education, K–12, and policy communities have come together to create the Georgia Leadership Institute for School Improvement. Supported by the Bill and Melinda Gates Foundation, the Wallace-Readers Digest Fund, the Woodruff Foundation, and the State of Georgia, this institute aims to improve the recruitment, selection, preparation, development, and retention of the superintendents and school principals who will work on the front lines of school reform over the coming decade. Using techniques commonly employed in the business community, the Leadership Institute has conducted job task analyses of educational leadership positions. In doing so, it has identified core tasks, performance criteria, and outcome measures for integration into school leadership curricula at colleges and universities.

The Leadership Institute has benefited greatly from business participation. Representatives from companies including BellSouth, IBM, Southern Company, and UPS served on the institute's design team. In addition, business leaders have enriched the emerging leadership curriculum by supplying best practices in leadership development, an area in which the business community has a great deal of expertise.

Members of the Leadership Institute are codifying their work, identifying lessons they can share with other organizations that wish to replicate their efforts. They are also incorporating technology as a tool for the collection and dissemination of these lessons among education leaders throughout Georgia.

To learn more about Georgia's Leadership Institute for School Improvement, please visit [www.galeaders.org](http://www.galeaders.org).

## 6. Design replicable programs

Even when designing small-scale programs whose immediate impact might not extend beyond a single institution or local area, businesses should consider ways in which others might replicate their efforts. They should research their processes, identify central principles guiding their work, and share best practices with other organizations.

## 7. Consider the needs of nontraditional students

A growing share of postsecondary students does not fit the familiar model of 18- to 24-year-olds who study on traditional college campuses. Many are working adults who must study part-time. Some live far from any college campus and must therefore complete their education using distance learning technologies. A growing number already have postsecondary credentials and have gone back to school to refresh or update their skills. Many do not receive any student aid, despite serious financial need. To encourage broader participation among such nontraditional students, businesses can:

- support lifelong learning among their own employees by defraying the cost of study or granting flextime to accommodate employees' academic schedules; and
- support "user-friendly" educational options, such as distance-learning technologies, university extension programs, or business/education training partnerships.

### Expanding Access: The Alliance for Higher Education

Created over 30 years ago by Cecil Green, cofounder of Texas Instruments, the Alliance for Higher Education enables employees at companies such as Abbott Labs, Lockheed Martin, NORTEL, and Motorola—among many others—to study at an extensive array of two-year, four-year, for-profit, and not-for-profit universities throughout Texas. A nonprofit organization supported by business, higher education, government, and private foundations, the Alliance aims to "improv[e] access to higher education for traditional and non-traditional students."

The convenience of distance education is central to the Alliance's value to working adults: "By linking higher education directly to the workplace via distance education, the Alliance serves business and industry with quality education and training needed to ensure a highly skilled workforce." By "linking public school teachers to on-going university education," "delivering education and certification opportunities directly to health care professionals," and "advancing literacy projects via distance education technologies," the Alliance lives up to its mission of bringing higher education to a broader segment of the population.

For more information on the Alliance for Higher Education, please visit [www.allianceedu.org](http://www.allianceedu.org).

## 8. Support strategies for measuring student learning

Because states cannot usefully measure learning outcomes until they identify precisely what they should measure, they must determine what essential competencies all college graduates should learn. Business can play a vital role in this process. At a time when personal, civic, and professional life all require

greater quantitative literacy, reading skills, critical thinking abilities, problem-solving abilities, and communications skills, everyone will have to master core competencies and skills, regardless of their particular career trajectories. Business leaders must join with educators to define these competencies more precisely within their 21<sup>st</sup>-century context. Only then can they help in the development of assessments that will allow educators and policy makers to collect—for the first time—meaningful comparable data on student learning. This process of defining, teaching, and assessing a necessary common foundation of skills will not be easy, but it will grow increasingly unavoidable as more students, employers, and even educators demand reliable assurances of educational quality.

The need to isolate and measure essential competencies is growing increasingly crucial within specific degree majors, especially in technical fields where constant innovation drives an accelerating pace of change. To remain in step with the knowledge economy's evolving demands while ensuring the continued relevance of their curricula, colleges and universities will have to work with business and industry to define these more technical competencies.

### **9. Exhibit staying power**

The most important improvements to higher education will not occur overnight. Short-term gains in quality and access can founder on changes in political will, economic problems, or the academy's resistance to change. Indeed, the budget crisis now confronting states nationwide has slowed or perhaps even reversed some hard-won progress toward greater accessibility.

Policy makers and business leaders alike need to avoid the short-term thinking that dooms projects from the outset. As *Losing Ground: A National Status Report on the Affordability of American Higher Education* suggests, this sort of thinking has contributed to the erosion of college affordability. By following careless investment in times of prosperity with reckless divestment in times

## **Measuring Outcomes: The National Forum on College-Level Learning**

In late November 2001, business, policy, and higher education leaders met at the National Forum on College-Level Learning in Purchase, New York, to discuss the issue of student learning outcomes. The Forum's participants agreed that the time had long since come for a concerted effort to assess college-level learning. They also concluded that the business and higher education communities should eventually join forces to create an assessment measuring the competencies that all college graduates should possess—such as critical thinking, problem solving, and communications skills.

Forum participants also lent support to a shorter-term plan for using existing tests, such as graduate school admissions and professional licensure examinations, to measure college-level learning. These discussions have led to a revolutionary pilot project to measure college-level learning in individual states. Together with the Forum's advisory board, The National Center for Public Policy and Higher Education has been developing a model for using available data to assess learning in Kentucky. Over the next two years, this project will be extended to several more states.

For more information about the National Forum, see *Measuring Up 2002*, pages 69–72. For more information on the Kentucky pilot project, see pages 77–79.

of hardship, policy makers have failed to develop a sustained strategy for curbing spiraling tuition.

Business-led initiatives that sustain long-term vision despite short-term obstacles enjoy the greatest chance of success. Motivated by a lasting commitment to improving higher education, businesses can make steady progress toward their goals while carefully measuring the return on their investment through both feast and famine. Because the need for highly educated citizens will continue to grow far into the future, business leaders, educators, and policy makers have no choice but to persevere in their improvement efforts.

# Selected Resources on Higher Education

**V**isit the Web site of the National Center for Public Policy and Higher Education ([www.highereducation.org](http://www.highereducation.org)) to:

- order or download the 2000 and 2002 editions of *Measuring Up*;
- order or download reports supplemental to *Measuring Up 2000* and *Measuring Up 2002*; or
- review additional data on higher education in individual states.

## HIGHER EDUCATION ASSOCIATIONS

The American Association for Higher Education ([www.aahe.org](http://www.aahe.org))  
The American Association of Community Colleges ([www.aacc.nche.edu](http://www.aacc.nche.edu))  
The American Association of State Colleges and Universities ([www.aascu.org](http://www.aascu.org))  
The American Council on Education ([www.acenet.edu](http://www.acenet.edu))  
The Association of American Colleges and Universities ([www.aacu.org](http://www.aacu.org))  
The Association of American Universities ([www.aau.edu](http://www.aau.edu))  
The Council of Independent Colleges ([www.cic.org](http://www.cic.org))  
The League for Innovation in the Community College ([www.league.org](http://www.league.org))  
The National Association of Independent Colleges and Universities ([www.naicu.edu](http://www.naicu.edu))

## THINK TANKS AND POLICY ORGANIZATIONS

The Education Commission of the States ([www.ecs.org](http://www.ecs.org))  
The Futures Project ([www.futuresproject.org](http://www.futuresproject.org))  
The Institute for Higher Education Policy ([www.ihep.com](http://www.ihep.com))  
The Institute for Research on Higher Education ([www.irhe.upenn.edu/irhe/](http://www.irhe.upenn.edu/irhe/))  
The National Center for Public Policy and Higher Education ([www.highereducation.org](http://www.highereducation.org))

## BUSINESS/HIGHER EDUCATION PARTNERSHIPS

The Alliance for Higher Education ([www.allianceedu.org](http://www.allianceedu.org))  
The Arizona Partnership for Higher Education and Business ([www.apheb.org](http://www.apheb.org))  
The Business–Higher Education Forum ([www.acenet.edu/programs/bhef/](http://www.acenet.edu/programs/bhef/))  
The New Hampshire Forum on Higher Education ([www.nhheaf.org](http://www.nhheaf.org))  
The Virginia Business/Higher Education Partnership ([www.fundhigherednow.org](http://www.fundhigherednow.org))

## PERIODICALS DEVOTED TO HIGHER EDUCATION

*Change: The Magazine of Higher Learning* ([www.aahe.org/change/](http://www.aahe.org/change/))\*

*The Chronicle of Higher Education* ([www.chronicle.com](http://www.chronicle.com))\*

*National CrossTalk* ([www.highereducation.org/crosstalk/index.shtml](http://www.highereducation.org/crosstalk/index.shtml))

\*Available by subscription only.

## ABOUT THE NATIONAL CENTER FOR EDUCATIONAL ACCOUNTABILITY AND THE NATIONAL ALLIANCE OF BUSINESS

For 35 years, the National Alliance of Business served the nation as the business organization focused solely on increasing student achievement and improving the competitiveness of the workforce. Its central purpose was to increase individuals' skills and knowledge mastery by working with employers, educators, training providers, coalitions, and policy makers to align the learning opportunities at all levels of the education and training system with the increasing demands of the knowledge economy.

The National Alliance of Business (NAB) joined forces with the National Center for Educational Accountability (NCEA) in the fall of 2002 to bolster the quality of education for students and respond to states' needs as they move forward to implement standards and accountability in the nation's classrooms.

The National Center for Educational Accountability, created in October 2001, is a joint venture of the Education Commission of the States, the University of Texas at Austin, and Just for the Kids, a nonprofit organization based in Austin, Texas. The Center's mission is to expand states' knowledge of how to use data to monitor, analyze, and improve student and school performance. The Center accomplishes its work through a combination of data analysis, investigation of best practice, research, policy analysis, and training.

The newly enhanced organization ensures businesses and business-led coalitions throughout the country are provided the information and resources they need to expand their involvement in education reform, notably issues of accountability and best practices in standards-based reform.

Specifically, new roles for NCEA now include:

- **Supporting business-led coalitions** working on education issues at the state and local level;
- **Aligning NCEA efforts** with other national business and education groups; and
- **Providing information** to help states effectively implement the *No Child Left Behind Act*.

The new Washington-based arm of NCEA will become the major center for providing information to national and state business coalitions on education reform issues.

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