



ACROSS THE GREAT DIVIDE

PERSPECTIVES OF CEOS AND COLLEGE PRESIDENTS ON
AMERICA'S HIGHER EDUCATION AND SKILLS GAP

MARCH 2011



CIVIC ENTERPRISES
CORPORATE VOICES FOR WORKING FAMILIES

In Association with:

INSTITUTE FOR A COMPETITIVE WORKFORCE,
U.S. CHAMBER OF COMMERCE
PETER D. HART RESEARCH ASSOCIATES

Written by:

JOHN BRIDGELAND
JESSICA MILANO
ELYSE ROSENBLUM



Training

Knowledge

useful and

backbone

required

TABLE OF CONTENTS

An Open Letter to the American People	2
Executive Summary	3
Introduction: The Great Divide	6
View from the Top: Perspectives of Business and College Leaders	7
The State of American Education	7
The State of Hiring in the United States	7
Two Crucial Misconceptions	9
Righting the Ship	9
Addressing the Nation’s Misperception of Associate’s Degrees	9
The Other Dropout Crisis	12
A Picture of the Bubble within the American Workforce	14
A Blueprint for Reform	15
Businesses Take Steps to Meet the Challenge	16
Earn and Learn	16
Case Studies: Businesses Making an Impact	18
Business and Educational Institutions Support Reforms	21
Government Must Meet the Challenge	23
Paths Forward	24
Credentials Count	24
Foster Business and Community College Partnerships.	25
Change our Vernacular	25
Get Transfers Right.	25
Incent Completion, Not Just Enrollment	26
Measure Success (and Failure)	26
Conclusion	27
Acknowledgments and Notes	28
Appendix	28
Bibliography	29

AN OPEN LETTER TO THE AMERICAN PEOPLE

A GREAT DIVIDE HAS EMERGED in the United States between the education and skills of the American workforce and the needs of the nation's employers. Many of those looking for work do not have the skills required by companies looking to hire—resulting in high unemployment even as businesses desperately seek new talent. If our nation fails to bridge this gap, we will risk our ability to compete effectively on the global stage.

The good news is there is broad agreement among business and higher education leaders that a post-secondary degree or credential is important for success in the workplace. Many employers are even taking steps to support the education and boost the skills of their employees. But two widespread misperceptions are standing in the way of efforts to bridge the career readiness gap.

The focus on “college” too often excludes the demand for those who hold two-year associate's degrees and trade-specific credentials. Despite the conventional wisdom that bachelor's degrees are critical to success, the job market of the future will demand a vast new supply of talented graduates of a diverse range of post-secondary programs, including those that are two-years or less. Not recognizing the value of these degrees is hindering our efforts to meet the needs of employers.

While the nation appropriately focuses on ensuring that more students graduate from high school ready for college, little attention has been paid to the hidden crisis of undergraduates who leave college and other post-secondary institutions before completing their degrees. The national spotlight on “access” to college has shrouded another priority: ensuring that those who enter college programs graduate with the skills and credentials they will need to succeed in the workforce and help America remain competitive around the world.

Recently, President Obama issued a bold challenge: Americans should once again lead the world in college attainment by 2020. Meeting that goal will require the federal government to work collaboratively with the nation's businesses and educational institutions. To address the college completion crisis, leaders at every level need to put a greater emphasis on helping students attain credentials on their way to earning degrees by working together to make it easier for students to transfer credits from certificate programs to two-year and four-year degree programs. Traditional colleges need to adapt their programs to the rhythms of life for working students, simultaneously aligning their programs to meet the demands of nearby employers. At the same time, businesses need to find ways to help their employees earn new degrees.

Americans have long valued providing more access to higher education, but today the realities of global competition have put a new premium on college degrees and credentials. To assemble the workforce the nation needs to thrive, policymakers, educators, and businesses will need to collaborate to build more paths for students to climb the ladder to success. Already, businesses and educators around the country are engaging in the sort of reforms required to bridge the great divide. But much more needs to be done to educate more Americans and fulfill the promise of our nation.

EXECUTIVE SUMMARY

WHILE ACCESS TO HIGHER EDUCATION HAS EXPANDED significantly in the United States over the last century, a new crisis has emerged: disturbing numbers of students who enroll in post-secondary education are failing to complete their degrees with huge consequences to them, society, and the economy. Today, more than 70 percent of high school graduates enroll in some kind of advanced education within two years. Yet, just over one-half of bachelor's degree candidates complete their degree within six years, and less than one-third of associate's degree candidates earn their degree within three years.¹ America has a serious college completion crisis.

Stagnant college completion rates are not only a problem for those students who, by dropping out, earn less over the course of their lives than those who graduate, but also to the economy as a whole, which is less competitive without a workforce prepared to meet the demands of the nation's employers. Nearly two-thirds of job openings in the next decade will require some post-secondary education.² To fill these jobs, the U.S. will need to accelerate its progress and produce 3 million more students who graduate with a post-secondary degree by the end of this decade.³ To achieve the President's goal to lead the world in post-secondary attainment by the end of this decade, we will need to produce 8 million more graduates than we are currently expected to produce.⁴

America's companies and higher education institutions have significant roles to play in meeting this challenge and in shaping the workforce of the future. To better understand the views of these two critical groups of leaders, Civic Enterprises and Hart Research surveyed a national cross section of 450 business leaders and 751 post-secondary leaders at community colleges, private sector career colleges, and less selective four-year institutions for their perspectives on the challenges, goals, and work ahead to cross the great divide. This report offers a clear-eyed view of the state of American education, where our business and higher education leaders can make a difference, and a roadmap for focusing on what needs to be done to prepare future workers for the demands of tomorrow's economy.

A CAREER READINESS GAP

Our survey shows business leaders experience high levels of frustration in hiring, indicating a gap between the skills of the nation's workforce, as they exist, and the demands of the nation's job market.

- **More than half (53%) of business leaders say their companies face a very or fairly major challenge in recruiting non-managerial employees with the skills, training, and education their company needs, despite unemployment close to 10% and millions of Americans seeking jobs at the time of our survey.**

1 United States Department of Education, National Center for Education Statistics. (2010). Digest of Education Statistics, 2009 (NCES 2010-013). These completion rates apply only to first-time, full-time students completing degrees within 150% of normal time.

2 Georgetown University Center on Education and Workforce, *College is Still the Best Option*, <http://www9.georgetown.edu/grad/gppi/hpi/cew/pdfs/college%20still%20best%20option.pdf>

3 The Spring Board Project. (2009). *Getting Ahead, Staying Ahead: Helping America's Workforce Succeed in the 21st Century*.

4 Obama, B. (August 9, 2010). *Remarks by the President on Higher Education and the Economy at the University of Texas at Austin*, The White House, Washington, D.C.



- Those at smaller companies, who were responsible for over 50 percent of new jobs created in 2007⁵, feel this most acutely: 67% say it is difficult while only 33% find it easy.

However, the focus on “college” too often excludes the demand for those who hold two-year associate’s degrees and trade-specific credentials.

- Most business leaders (98%) believe the term “college” means a four-year degree. Just 13% of business leaders also think of a two-year associate’s degree, and only 10% say “college” includes a career or technical credential. By the end of this decade, however, about an *equal percentage* of jobs will require a bachelor’s degree or better (33%) as some college or a two-year associate’s degree (30%).⁶
- The majority of business leaders (63%) believe a four-year bachelor’s degree is the important degree to achieve success in the workplace, while only 18% believe a career or technical credential and 14% believe a two-year associate’s degree are important to achieve such success.
- Almost half (47%) of business leaders believe a four-year bachelor’s degree offers the best return on investment for their companies and for students, and 35% felt the same way for career and vocational education. Only 18% of business leaders felt two-year associate’s degrees offered a good return on investment for students and only 15% believed such a degree was a good return on investment for their companies.

Business and education leaders see different priorities for post-secondary education based on their own missions:

- Underlying employers’ focus on four-year degrees and career credentials is the priority they place on post-secondary education providing both career knowledge and skills and academic knowledge. When asked to select the two most important goals for post-secondary education, business leaders place the greatest premium on preparing individuals for success in the workplace (56%), then providing individuals with core academic knowledge and skills (51%), and providing individuals with the workforce knowledge and skills for success in a specific career (50%).
- Highlighting the disconnect between classroom learning and the workplace, education leaders place greater emphasis on academic knowledge than career skills. When asked to select the two most important goals for post-secondary education, education leaders place the greatest premium on providing individuals with core academic knowledge and skills (64%), preparing individuals to be lifelong learners (47%), and, more generally, preparing individuals for success in the workplace (44%). Just 28% of education leaders said providing individuals with the workforce knowledge and skills for success in a specific career was their single or second most important priority.

- Community colleges can best serve their students by recognizing the market value, and demand for, career credentials. When asked to rank the two most important goals for post-secondary education, nearly twice as many community college leaders selected providing individuals with core academic knowledge and intellectual skills (60%) than providing individuals with the workforce skills and knowledge for success in a specific career (34%).

A BLUEPRINT FOR REFORM

Notwithstanding some of these disconnects, there is a strong appetite to bolster post-secondary completion. Business and education leaders recognize the important role that post-secondary education plays in preparing students for careers and are taking collaborative steps to integrate work and learning.

- More than three in four business leaders believe that increasing post-secondary completion will have an extremely or very positive impact on the U.S. economy (79%) and workforce productivity (76%). They also recognize the potential to affect both the success of their company (75%) and their company’s ability to hire and retain employees with the necessary skills and knowledge (75%).
- Over 80 percent of education leaders we surveyed identified financial pressures, such as needing to work, as a major challenge to students completing a post-secondary degree or credential at their institution. And 42 percent of education leaders selected their students’ need to work as the single biggest obstacle to improving post-secondary completion rates at their institution.
- Integrating work and learning is key to a successful strategy. As part of our survey, we tested 11 forms of engagement for employers, and fully 86% of business leaders indicated that their company was engaged in at least one and 46% said their companies were engaged in at least four. Smaller companies with 50 to 250 employees were the least likely to have engaged, but even 75% of them participated in at least one. The concrete actions that businesses are most likely to be taking include offering flexible work schedules to employees, providing a tuition assistance program for salaried employees, or offering internships or apprenticeships.
- More cooperation needs to be fostered between businesses and educational institutions. American companies are least likely to be participating in activities or partnerships directly with post-secondary educational institutions, such as providing feedback to help higher education institutions improve their career preparation (13%), or working with institutions one-on-one or through an industry consortium to develop cost-effective, company relevant certificate or degree programs for current employees (13%).

⁵ Stangler, D. & Litan, R. (2009). *Where will the jobs come from?*, Kauffman Foundation.

⁶ Carnevale, A., Smith, N., & Strohl, J. (2010). *Help Wanted: Projections of Jobs and Education Requirements Through 2018*. Center on Education and the Workforce. Georgetown University, Washington, D.C.

“Closing the skills gap is an important issue for business leaders, for citizens, and for the country as a whole.”

—John Pepper, former Chairman and CEO, Procter & Gamble

THE PROMINENT ROLE OF FEDERAL AND STATE GOVERNMENTS

In our survey, business and education leaders each expressed their belief that many players, including institutions of higher education, government, and employers, will all have to step up to the plate if the nation is to close the skills gap.

- **Business leaders voiced a belief that the federal government has the greatest responsibility in undertaking efforts to increase post-secondary completion rates (47%).** They also believe four-year public institutions (44%) and state governments (41%) have responsibility. But just 19% thought employers have the single greatest or second greatest responsibility to undertake efforts to increase post-secondary completion.
- **Education leaders, on the other hand, expressed a belief that state governments have the greatest ability and responsibility to affect post-secondary completion (54%).** They ranked the federal government second in terms of responsibility (47%). They also placed more responsibility on their own category of institution to undertake efforts to increase completion rates: 48% of leaders at four-year public colleges and universities, 61% of community college leaders, and 43% of leaders at career and technical institutions think their own institutions are responsible for improving outcomes.
- **Thus, nearly half of business (47%) and higher education leaders (47%) believe the federal government has the greatest responsibility to increase post-secondary completion rates.** The message to policymakers in Washington, especially the new Congress, is clear: companies and colleges are looking to Washington to lead on this issue and to provide a clear roadmap and call to action to meet ambitious, but achievable national goals.

THE PATH FORWARD

To be first in the world in educational attainment by the end of this decade, we must recognize the value of career credentials and associate’s degrees; re-imagine how these degrees are offered; ensure they are more closely aligned with workforce needs; create incentives for students, post-secondary institutions, and businesses to reward completion; and measure our efforts to ensure we are accountable for results.

- **Credentials count.** Employers value credentials and view them as reliable indicators of career knowledge and skills. Reimagining the associate’s degree as inclusive of competency-based credentials, particularly industry certifications, would increase the value of the degree. Community colleges, and other associate’s degree granting institutions, and employers should work together to make credentials count.

- **Foster Business and Community College Partnerships.** It is crucial that American businesses work collaboratively with community colleges, and other associate’s degree granting institutions, to ensure that they are producing graduates with the competencies required by the business community. The successful “Earn and Learn” models outlined in this report (collaborations between employers and post-secondary institutions that support attainment of post-secondary credentials) provide the roadmap for how these partnerships could work. Expanding on these efforts will be vital to building a 21st century workforce that meets the demands of the future.
- **Change our Vernacular.** Too often we set the four-year degree apart from other post-secondary degrees by including only the former in the term “college.” If we are to ensure that the majority of workers can contribute to and share in the nation’s economic prosperity, we must increase the number of post-secondary graduates. Including degree attainment as part of our understanding of “college” could be an important step in elevating the value of career credentials and two-year degrees.
- **Getting transfer right matters.** Students and employers see a bachelor’s degree as having the highest return on investment. Accumulating credits that do not transfer from credentials to two-year and four-year degrees is inefficient and creates unnecessary obstacles for students trying to continue their education. Making transfer agreements among two- and four-year institutions more transparent, better structured, and tightly articulated to high-value bachelor’s degree pathways is critical.
- **Create incentives for completion, not just enrollment.** We will not produce 8 million additional graduates by the end of the decade simply by finding more students to enroll in post-secondary education. To move from a higher education system focused on access to one focused on both access and completion, we need to examine and re-align incentives to ensure students, post-secondary institutions, and employers are focused on, and rewarded for, increasing graduation rates. Examples of incentives that reward completion are:
 - **Partial loan forgiveness for students who persist and graduate or increases in Pell grant contributions to eligible students as they progress through their courses and ultimately earn a degree or credential.**
 - **Performance funding for post-secondary institutions that aligns public spending on higher education with a state’s goals for workforce development and economic growth.**
 - **Tax incentives for businesses to reduce the cost of ‘Earn and Learn’ programs.**
- **Measure Success (and Failure).** To truly be accountable for improving graduation rates, we must be able to track progress with effective data.

INTRODUCTION: THE GREAT DIVIDE

HOW CAN IT BE that today, in the midst of the most severe economic downturn since the Great Depression and millions of Americans seeking work, that 53 percent of employers find it difficult to find qualified workers? How can a workforce desperate for new jobs appear so helpless amid so many businesses desperate to hire? Why are Americans stuck in a moment when employers are seeking talent, job-seekers are looking for work, but the economic recovery nevertheless proceeds at a snail's pace?

The answers to those questions can best be found by understanding the new divide that has developed within the American economy. Over the last several decades, a chasm has emerged to divide the skills of the nation's workforce, as they exist, and the demands of the nation's job market. The way we train our young people no longer produces workers with the types of skills that our businesses want to hire. And closing that gap is a crucial prerequisite to meeting the nation's economic potential.

The origins of this divide are not particularly hard to understand. Nearly two-thirds of the jobs in today's economy are high-skill positions. Yet the American workforce has fewer than half the

number of qualified candidates needed to fill those positions. American businesses currently demand 97 million high-skill employees—but only 45 million Americans have the necessary skills to do the work.⁷ And that lack of supply forces employers to choose among outsourcing jobs, importing skilled workers, or relocating operations to overseas markets with a rising supply of skilled workers.

At the same time, the nation is replete with an excess of workers prepared only to fill the remaining one-third of the job market—namely low-skill and low-wage positions. There are more than 100 million candidates for 61 million openings.⁸ The resulting glut of job seekers drives up unemployment and holds down wages for the nation's low-skilled workforce.

What's more, the mismatch will become even more pronounced. The evolution of the nation's economy is clearly headed away from low-skill jobs. By 2020, three-quarters of the job market will be high-skill and only 26 percent will be low-skill.⁹ The broader implication is plain: if America wants to remain competitive, we will have to expand our supply of high-skill workers.

⁷ Gordon, E. (2009). The Global Talent Crisis, The Futurist.

⁸ Ibid.

⁹ Ibid.



“ It is a significant issue if people are not being trained for the jobs that exist and, perhaps more to the point, the jobs that are evolving, because then our economy and nation are in real trouble.”

— Taylor Reveley, President,
The College of William & Mary

VIEW FROM THE TOP:

PERSPECTIVES OF BUSINESS AND COLLEGE LEADERS

THE STATE OF AMERICAN EDUCATION

The GI Bill established in the years following World War II opened the doors of higher education to legions of middle class Americans who would otherwise have been shut out. From 1940 to 1970, the percent of young adults with a bachelor's degree or higher more than doubled and the U.S. boasted the most educated workforce in the world.

Today, however, that advantage is slipping. While the U.S. leads the world in educational attainment among 55 to 64 year olds, it is currently in 4th place among 35 to 44 year olds and 10th place among 25 to 34 year olds.¹⁰ For the first time in our history, today's cohort of young adults risks having lower educational attainment rates, on average, than their parents, threatening both America's economic future and a fundamental tenet of American democracy—a chance at the American Dream. The result is stark: the children of parents in many European countries, from which so many immigrants still come to the United State for more opportunities, now have greater socio-economic mobility than those in the United States.¹¹

The irony is that just as American educational attainment has begun to fall, the *demand* for highly educated workers in the U.S. has continued to climb. A post-secondary degree or credential has become more important than ever in today's workforce. Over the past four decades, "all of the net job growth in America has been generated by positions that require at least some post-secondary education."¹²

"There are some tremendously brilliant, bright, well-educated students that come out of our system. They just don't happen to be in the majority or of adequate quantity to provide a long-term competitive advantage for the U.S. in the global marketplace."

— Len Rodman, Chairman, President and CEO of Black & Veatch

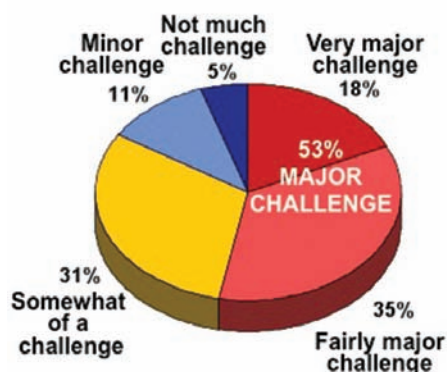
THE STATE OF HIRING IN THE UNITED STATES

In September 2010, two surveys of business and higher education leaders were conducted to better understand their perceptions of how the nation's education system is preparing young Americans for success in the global economy and how these perceptions might lead to ideas around improved outcomes. Those surveyed included CEOs and other C-suite level executives,

senior vice presidents, officers, and vice presidents at companies from a variety of industries, and Presidents, Chancellors, CEOs, Provosts, and other officers of community colleges, private sector career colleges, and less selective four-year colleges and universities. In addition, in-depth interviews were conducted with 25 business and higher education leaders from which the quotes throughout this report are drawn.

The results, as described below, are startling. More than half of business leaders (53%) say their companies face a very or fairly major challenge in recruiting non-managerial employees with the skills, training, and education their company needs. Another 31% describe it as somewhat of a challenge, and just 16% say it is a minor problem or not really a problem. In sum, regardless of company size or the position of the leader within that company, majorities indicate that recruitment of non-managerial employees is difficult.

How big a challenge is recruiting non-managerial employees with the skills, training, and education your company needs?



And it is even harder finding enough workers with a post-secondary degree or credential who have the knowledge and skills their company needs: business leaders are one and a half times as likely to say it is difficult (60%) than to say it is easy (40%). In particular, those at smaller companies, who are responsible for the most new jobs created, feel this most acutely: 67% difficult, 33% easy, while a majority (51%) of those at companies with more than 5,000 employees still find it difficult. No group of employers believes, on average, that finding qualified employees is easy.

¹⁰ Organization for Economic Co-operation and Development. (2007). *Education at a Glance 2007: OECD Briefing note for the United States*.

¹¹ Jantti, M., et. al. (2006). *American Exceptionalism in a New Light: A Comparison on Intergenerational Earnings and Mobility in the Nordic Countries, the United Kingdom, and the United States*. Discussion Paper 1938. Bonn.

¹² Pathways to Prosperity Project. (January 2011) *Pathways to Prosperity: Meeting the Challenge of Preparing Young Americans for the 21st Century*. Harvard Graduate School of Education, Cambridge, MA.

Regardless of company size, businesses note difficulties finding skilled employees.

How easy/difficult is finding enough people in the U.S. with a post-secondary degree who have the knowledge/ skills your company needs?

	All	Number of Employees			
		50-250	251-1,000	1,001-5,000	More than 5,000
Very/Somewhat Easy	40%	33%	39%	41%	49%
Very/Somewhat Difficult	60%	67%	61%	59%	51%

The perceptions revealed in the survey are true to the underlying reality in the American job market: the share of jobs requiring at least some post-secondary education has increased substantially over the last four decades while the skills of the workforce have not kept pace. In 1973, 72 percent of the nation's 91 million workers had a high school education or less. By 2007, despite the workforce swelling to 154 million workers, those with a high school education or less had shrunk to 41 percent. Put another way, despite the total number of jobs in America increasing by 63 million, the number of jobs for those with a high school education or less actually fell by 2 million. And this decline will continue: by 2018 the share of jobs for workers with a high school education or less will be just 36 percent.¹³

“The skills gap is going to be widening in the future. We hear this complaint over and over again from business and industry.”

—George Boggs, former President & CEO, American Association of Community Colleges (AACC)

While the Great Recession caused unemployment to climb for all workers, there is evidence that unemployment among young adults (aged 20-24) has been much worse due in part to this broader structural shift in the economy. The share of young adults working dropped 17 percent over the last decade compared to an 8 percent decline in employment for older workers (aged 25-54). There is one bright spot, however—adults aged 25-30 who have at least an associate's degree are significantly more likely to be employed than those who have a high school education or less.¹⁴

Two trends help explain the growth in job openings for workers with at least some college education. First, the fastest-growing industries—such as nursing, health technology, information technology, and clean energy—require workers with disproportionately higher education levels. And second, employers as a whole are steadily requiring more of their workers to innovate, operate new technologies, and more generally maintain their competitive advantage in their



“I see a growing skills gap, which is more severe now than in the past. I think it's growing for two reasons. First, the skills and knowledge required, both in the workplace and just to be a citizen are growing. The sophistication and level of knowledge and skill required are more demanding than before. And secondly, we've been coasting as a nation on what we achieved in the last generation educationally. The education of our workforce is not keeping pace with the demands of the world.”

—Dr. Paul E. Lingenfelter, President, The State Higher Education Executive Officers Association

industries—competencies driven largely by more education. As a result, college has increasingly become the pathway to the majority of jobs.

That trend is expected to continue in time. According to research by Anthony Carnevale of the Center on Education and the Workforce at Georgetown University, by 2018 not only will two-thirds of workers need at least a certificate, associate's degree, bachelor's degree or higher, but “42 percent of the workforce [will] need some form of occupational certification, registration, or licensure to perform their jobs.”¹⁵

Exacerbating job demand for highly educated workers, many members of the Baby Boom generation are nearing retirement. As these 78 million Americans leave their jobs, the demography of the American workforce will change, as those who replace the older cohort are not as well educated. Unfortunately, “large proportions of the younger generations are among those who

¹³ Ibid.

¹⁴ Ibid.

¹⁵ Carnevale, A., Smith, N., & Strohl, J. (2010). *Help Wanted: Projections of Jobs and Education Requirements Through 2018*. Center on Education and the Workforce. Georgetown University, Washington, D.C.

are least well served by the U.S. system of education currently: those whose educational opportunity and attainment reflect the disadvantages of race, income, and geography.”¹⁶

Moreover, at current graduation rates, the demand for college-educated workers will outpace supply by 300,000 workers per year so that “by 2018 we end up with a shortfall of workers with associate’s degrees or better of about 3 million.” To make up for this shortfall, “degrees conferred would have to increase by about 10 percent a year,” by Carnevale’s estimates, or “the economy would need to slow its demand for higher educated workers,” impacting productivity and economic growth.^{17,18}

It is clear from our survey results that employers are acutely aware of the evolution of the workforce, and the growing strain to find competent employees who have the necessary post-secondary skills to be successful in the workplace. In many cases, they are taking unprecedented steps to help potential hires complete their post-secondary training and garner the necessary certificates to perform discrete jobs.

TWO CRUCIAL MISCONCEPTIONS

But even after agreeing on the broad outlines of the challenge facing American businesses looking to hire, the survey also revealed two misguided assumptions held across the span of the nation’s business and educational leadership. And so, before we continue with discussions about what to do to prepare future generations to fill the needs of American businesses, we need to be clear about the differences between what many leaders believe, and then consider what is truly the case.

The first misconception held by many business and educational leaders is that bachelor’s degrees will necessarily represent the primary stepping-stone for future generations of American workers. To be sure, no one should doubt that American businesses will continue to demand highly educated workers, many of whom will need to earn a bachelor’s degree or an advanced degree to attain the knowledge and skills required to fill many of the positions available in the coming years.

But an unrealized demand for workers with *career credentials* or associate’s degrees—conferred generally by community colleges—could be the linchpin in determining how to prepare the future American workforce. As explained below, a growing percentage of American jobs will require the sort of training provided to those who hold two-year degrees or career credentials. And unless the business community recognizes that need—and the nation’s educational leadership supports these pathways—a key niche of the American job market may go unfulfilled.

Second, the nation’s business and education leaders share a broad misperception that America’s high schools are the sole

“Too much discussion has focused on initial access to educational opportunities (‘getting started’) rather than on attainment (‘finishing’).”

—William Bowen, former President, Princeton University

core of the nation’s failure to produce a proficient workforce and to maintain its place in the global competition. It is, of course, painfully true that too many of the nation’s high schools are failing their students, with dropout rates and subpar standards that leave too many young people unable to enter and be prepared for college.

But too often the focus on high schools obscures another crucial problem that gets too little attention: the crisis of *college completion*. As the research below reveals, the nation’s longstanding focus on getting students *into* college has failed to ensure that they emerge successfully with a degree. Today, more than 70 percent of high school graduates enroll in some kind of advanced education within two years. Yet, just over one-half of bachelor’s degree candidates will complete their degree in six years, and less than one-third of associate’s degree candidates will earn their credentials within three years.¹⁹

We have a “college access” culture in America today. It’s time for a greater focus on “college completion.”

RIGHTING THE SHIP

The survey results presented in this report serve as a clarion call to the nation’s leaders in government, business and education: the nation’s educational institutions are not producing the workforce that the economy needs. But our approach, to date, has too frequently been based on misguided assumptions.

To right our ship—to achieve President Obama’s goal for the United States to be first in the world in higher education attainment by 2020—we will need to take another look at the state of education, wipe away our misperceptions, and focus on what needs to be done to prepare future workers for the demands of tomorrow’s economy. A lot is already being done to point the way forward, as businesses have frequently taken it upon themselves to fill in where the nation’s educational institutions have fallen short. But presenting a clear-eyed view of the state of American education is the foundation for any progress. The report below aims to highlight some paths forward.

ADDRESSING THE NATION’S MISPERCEPTION OF ASSOCIATE’S DEGREES

Our survey results reveal that, for most business leaders, mention of the term “college” suggests a four-year degree. Ninety-eight percent say that they imagine a four-year degree when someone mentions college. Just 13% think of a two-year associate’s degree,

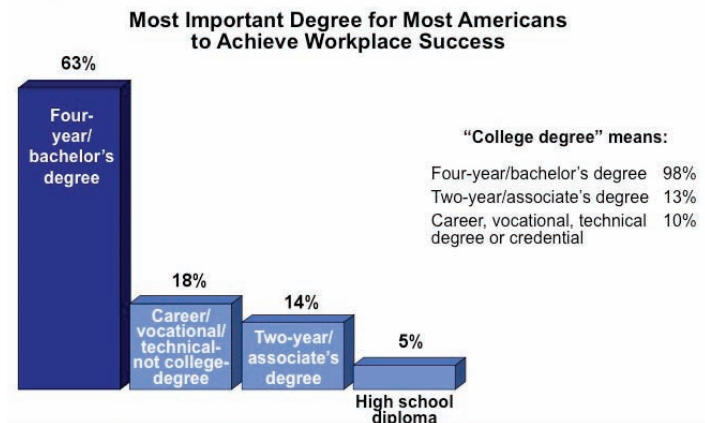
¹⁶ The National Center for Public Policy and Higher Education. (2010). *Measuring Up 2008: The National Report Card on Higher Education*.

¹⁷ Carnevale, A., Smith, N., & Strohl, J. (2010). *Help Wanted: Projections of Jobs and Education Requirements Through 2018*. Center on Education and the Workforce. Georgetown University, Washington, D.C.

¹⁸ A technical note on productivity growth: “If the expected slowdown in growth of the college educated labor force occurs, US productivity growth will also increase more slowly. Increases in workforce quality of .50 percent a year between 1915 and 2000 contributed about .35 percentage points per year to economy growth. Declines in labor force quality could cut the rate of productivity growth attributed to education by one-half or more (to between .06 and .17 percent) over the next 20 years. As a result, productivity growth could be reduced by as much as .29 percentage points a year, limiting wage growth and fiscal revenues.” From Committee for Economic Development. (2005). *Cracks in the education pipeline: A business leader’s guide to higher education reform*. Washington, D.C.

¹⁹ United States Department of Education, National Center for Education Statistics. (2010). Digest of Education Statistics, 2009 (NCES 2010-013). These completion rates apply only to first-time, full-time students completing degrees within 150% of normal time. *Business leader’s guide to higher education reform*. Washington, D.C.

Business leaders focus on four-year degrees.



and only 10% say a mention of college conjures thoughts of a career or technical credential.

Moreover, fully 63% of business leaders feel that the majority of Americans need a four-year degree in order to be successful in the workplace. Majorities place a priority on four-year degrees no matter company size, but leaders at smaller companies, with 50 to 250 employees, are less convinced (55% four-year degree, 20% associate's degree, 20% career credential) than are those with 1,000 or more employees (68% four-year degree, 12% associate's degree, 16% career credential).

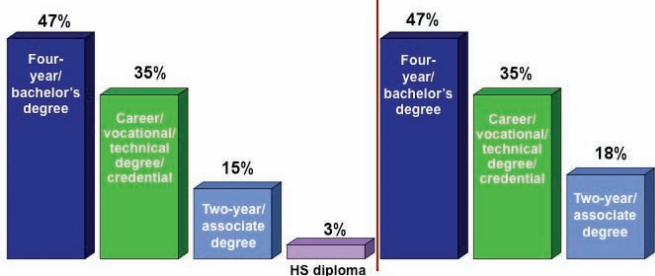
More than half of education leaders (56%) also believe a bachelor's degree is the most important degree for the majority of Americans to have. However, education leaders were more apt to believe an associate's degree is important for success in the workplace (33%) than a career or technical credential (11%).

When it comes to the return on investment for the students in general, the plurality of business leaders believe that a focus on earning four-year degrees and job-specific credentials offers the most effective strategy.

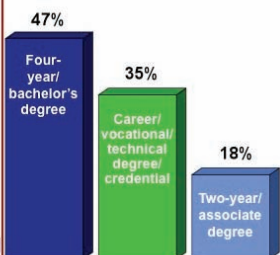
Perceptions about return on investment (ROI) vary notably depending on company size. While the majority of executives at companies with 1,000 or more employees believe that their

Business leaders believe four-year degrees and job-specific degrees/credentials offer the best ROI.

If your **company** devoted resources toward education/training, which degree/training would offer the best return on your investment?



Which degree/training offers the best return on investment for **students**?



company's investment in four-year degrees would provide the best ROI (57% four-year degree, 22% career credential, 19% associate's degree), the majority of leaders of smaller companies (50 to 250 employees) think that career credentials would yield the greatest value for their company (37% four-year degree, 54% career credential, 6% associate's degree). Executives at companies with 250 to 1,000 employees are evenly divided about which would provide a better ROI for their company (40% four-year degree, 41% career credential, 16% associate's degree).

Underlying employers' focus on four-year degrees and career credentials is the priority they place on post-secondary education providing both preparation for the workplace and core academic knowledge and skills. When asked to select the two most important goals for post-secondary education, business leaders place the greatest premium on preparing individuals for success in the workplace (56% select it as single most important or second most important priority), providing individuals with core academic knowledge and skills (51% select it as single most important or second most important priority), and providing

“It is clear to employers that the way we learned in the past is not going to give people all the skills they need for the future. The debate for the last 20 years has been about ‘skills’ versus ‘knowledge’ with the assumption that knowledge is an academic acquisition, and it is somehow superior to skills, which you get out of career technical courses. We need to discuss the fact that people need different knowledge and skills—some of them non-technical—than they used to in order to succeed in life, and we don't have any real coherent way of making sure people get both.”

—Karen Humphrey, Executive Director, California Postsecondary Education Commission

individuals with the workforce knowledge and skills for success in a specific career (50% select it as single-most important or second-most important priority).

Highlighting the disconnections between classroom learning and the workplace, education leaders place greater emphasis on academic knowledge than career knowledge and skills. When asked to select the two most important goals for post-secondary education, education leaders place the greatest premium on providing individuals with core academic knowledge and skills (64% select it as single most important or second most important priority), preparing individuals to be lifelong learners (47% select it as single most important or second most important priority), and, the more general, preparing individuals for success in the workplace (44% select it as single most important or second most important priority). Just 28% of education leaders said providing individuals with the workforce knowledge

and skills for success in a specific career was their single or second most important priority. These views clearly reflect the respective missions of businesses and higher education institutions.

But, in reality, for all the focus business leaders put on expanding four-year degrees, research indicates that at least as much demand in the job market will be for students who have completed career credentials or associate's degrees. According to Carnevale's research, "By 2018, the economy will create 46.8 million openings, 13.8 million brand-new jobs and 33 million 'replacement jobs,' positions vacated by workers who have retired or permanently left their occupations. Nearly two-thirds

While job growth for all workers is estimated to average 10% over the 2008-2018 period, job growth for associate's degree holders is expected to be nearly double that at 19.1%.

of these 46.8 million jobs—some 63 percent—will require workers with at least some college education. *About an equal percentage will require a bachelor's degree or better (33%) as some college or a two-year associate's degree (30%).* Only 36 percent will require workers with just a high school diploma or less."²⁰

EMPLOYMENT BY POST-SECONDARY EDUCATION CATEGORY	
Degree Type	Percent Change 2008-2018
Associate's degree	19.1%
Master's degree	18.3%
Doctoral degree	16.6%
Bachelor's degree	16.6%
Post-secondary vocational award	13.2%
Total, All Occupations	10.1%

Source: Table 9, Occupational Outlook Handbook 2009, Bureau of Labor Statistics, 2009.

In addition, as revealed by the U.S. Bureau of Labor Statistics, job growth will be fastest for workers with an associate's degree—faster even than new job growth for bachelor's degrees. While total job growth for all workers is estimated to average 10% over the 2008-2018 period, job growth for associate's degree holders is expected to be nearly double that at 19.1%.

Considering the particularly strong job growth for associate's degree holders and the open access and affordability of two-year degrees, associate's degrees could be the key to increasing post-secondary degree attainment and lowering unemployment. But for this to happen, business leaders need to be able to articulate what skills they need these graduates to learn, and associate's degree granting institutions need to be focused on successfully providing their graduates with the education and training to meet these workplace demands.

²⁰ Carnevale, A., Smith, N., & Strohl, J. (2010). *Help Wanted: Projections of Jobs and Education Requirements Through 2018*. Center on Education and the Workforce. Georgetown University, Washington, D.C.



Our findings also reveal a clear need for community colleges, and other associate’s degree granting institutions, to do a better job articulating to students and employers the relevance, importance, and value of associate’s degrees. While new job openings for traditional associate’s degree holders are expected to grow much faster (19%) over the next decade than for certificate holders (13%), certificates have gained in popularity and more than doubled in the number of awards in the last decade. According to Carnevale, certificates are the fastest growing awards conferred by institutions that participate in federal financial aid programs.²¹ And as mentioned previously, businesses, particularly those with fewer than 1,000 employees, value career credentials at least as much as they do bachelor’s degrees.

“School learning is abstract, theoretical, and organized by discipline while work is concrete, specific to the task, and organized by problems and projects. If we want to produce graduates with the skills employers need, we must bridge this divide. Community colleges are critical to this effort.”

—Robert Schwartz, Academic Dean, Harvard University Graduate School of Education

If these institutions struggle in making the case for associate’s degrees, they need to go back to the drawing board, re-imagining these degrees altogether as inclusive of competency-based credentials, particularly for industry certifications, ensuring that associate’s degrees indicate real value added to job seekers heading into the workplace.

This will be a challenge. When asked to rank the two most important goals for post-secondary education, nearly twice as many community college leaders selected providing individuals with core academic knowledge and intellectual skills (60%) than providing individuals with the workforce skills and knowledge for success in a specific career (34%).

If community colleges can recognize the market value and demand for career credentials, they stand to benefit from a key opportunity to increase the relevance of associate’s degrees to the business community through ladderized credentialing. Both certificates and associate’s degrees provide higher expected earnings than a high school diploma and sometimes even more than a bachelor’s degree. While, generally speaking, higher degrees have greater career earnings potential, it is also true that field of study is very important. Research shows that 27% of certificate holders and 31% of associate’s degree holders in high demand or technical fields earn more than a bachelor’s degree holder in a lower demand field. And 43% of certificate holders earn more than holders of associate’s degrees.²³ As a result, these degrees can be very close in value, making ladderized certificate

associate’s degrees an attractive idea for students, employers, and community colleges.

In the meantime, because both students and employers see a bachelor’s degree as the standard of higher education, it is critical that transfer agreements between two-year and four-year institutions become more transparent and better structured. To the degree that community colleges remain a crucial stepping-stone toward four-year degrees, employers need to understand that the education provided at the institutions that confer associate’s degrees provide real value added.

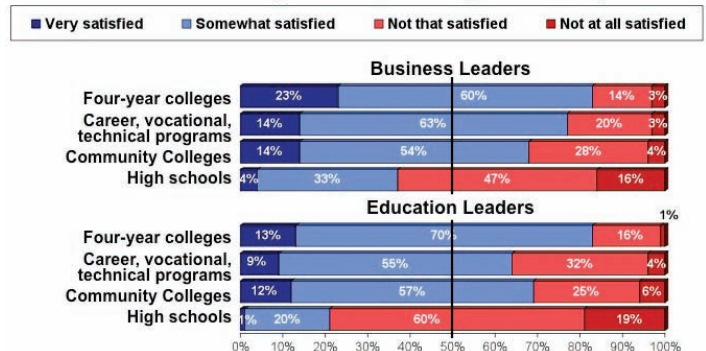
THE OTHER DROPOUT CRISIS

In our survey, business leaders expressed serious concern about the effect that high school dropouts have on leaving a significant portion of the workforce without the education needed to compete in the global economy. Of six education challenges tested, high school dropout rates were ranked as the most problematic. Their fears are well-founded, of course. Approximately 40% of high school dropouts are idle—out of school and out of work. High school dropouts who are working will earn nearly \$1 million less over their lifetimes than college graduates largely because they do not have the education, training, or skills to compete in an increasingly competitive workplace. Despite this, and some significant progress improving graduation rates over the last decade, one-fourth of all public high school students and nearly 40% of minorities will fail to graduate with their class.²²

And, indeed, high schools, more generally, are a major focus for concern of both business and educational leaders. Just 37% of business leaders say they are very or somewhat satisfied with the job high schools are doing in graduating students who have the knowledge and skills needed to succeed in today’s globally competitive environment, while 63% are not that or not at all satisfied. A mere 21% of education leaders are very or somewhat satisfied with high schools, while fully 79% are not that or not at all satisfied.

Satisfaction with the nation’s high schools is low.

How satisfied are you with the job these schools are doing graduating students with skills/knowledge to succeed in the global economy?



21 Carnevale, A. (March 20, 2009) *Valuing Certificates: Defining the Value of Certificates*. Center on Education and the Workforce, Georgetown University, Washington, D.C.

22 Ibid.

23 Balfanz, R., Bridgeland, J., Moore, L., & Hornig Fox, J. (November 2010) *Building a Grad Nation: Progress and Challenge in Ending the High School Dropout Epidemic*. Civic Enterprises, Everyone Graduates Center at Johns Hopkins University, and America’s Promise Alliance and Bridgeland, J., Dilulio, Jr., J., & Morison, K. (March 2006) *The Silent Epidemic: Perspectives of High School Dropouts*. Civic Enterprises, Washington, D.C.

Beyond those perceptions about the high school dropout crisis, leaders in both communities are concerned that the training students receive in many of the nation's high schools do not properly prepare students for the challenges of college and beyond.

By contrast, a phenomenon that should *also* be of significant concern—the fact that many college students begin post-secondary education but dropout before completing their

PROPORTION OF BUSINESS AND EDUCATION LEADERS RATING SELECTED ISSUES AS BIG PROBLEMS IN THE UNITED STATES		
	Business Leaders (% rating 8 to 10)	Education Leaders (% rating 8 to 10)
The number of individuals who drop out of high school before graduation	61	78
The number of individuals who graduate from high school without the knowledge and skills they need to succeed in the workplace.	59	70
The number of individuals who graduate from high school without the knowledge and skills they need to succeed in post-secondary education.	52	74
The number of individuals who graduate from high school but are unable to begin any post-secondary education due to financial or academic challenges.	41	61
The number of individuals who receive a post-secondary degree or credential but lack the knowledge and skills they need to succeed in the workplace	33	26
The number of individuals who start a post-secondary degree or credential program but do not graduate or obtain a degree or credential	23	51

degree—receives considerably less attention, particularly among business leaders. While poor high school preparation may be a contributing factor to college incompleteness, the frustration leaders feel with the nation's high schools is obscuring a pressing problem at the college level.

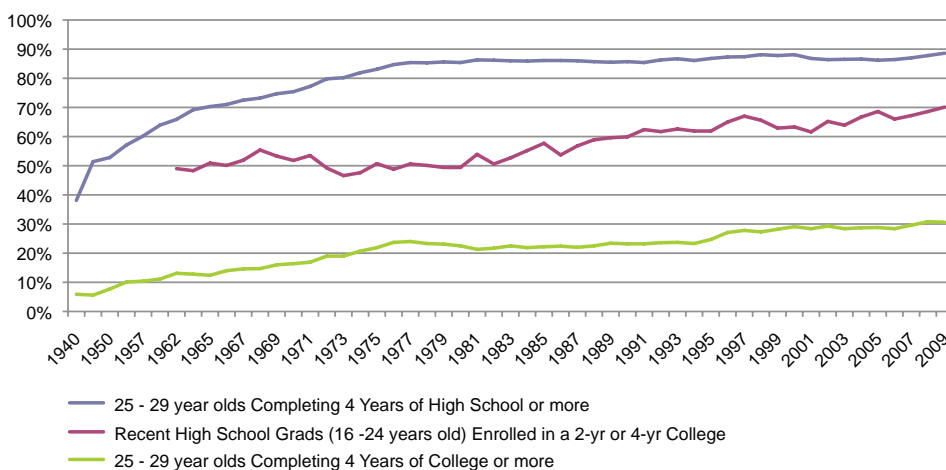
And that speaks to a widely misunderstood development that has defined efforts to expand and improve education for decades: while Americans are very focused on ensuring that students have access to higher education, there is little focus on whether those same students actually *attain* a degree.

Consider the broader history of America's effort to expand the reach of college education to a broader swath of the population. The GI Bill, established following World War II to open the doors of higher education to returning veterans, marked a great leap forward in the effort to expand access. And in the decades that followed, more and more Americans had the opportunity to attend, albeit by fits and starts. In the fall of 2009, college enrollment was projected to be a record 19.6 million students—and that figure is expected to continue setting new records from fall 2010 through fall 2018. By 2018, enrollment is expected to increase by another 9 percent.²⁴

But, in the meantime, something has emerged as a surprise. Despite the fact that so many more students are *enrolling* in college, a much smaller number are actually completing their degrees, leaving many students with heavy debt burdens and no credentials or degrees to get the jobs that will help them pay off their loans. Our focus on getting students to college has led us to ignore what happens *once they are there*. And a closer look reveals that, for all the students who are now entering the doors of institutions of higher learning, the percentage that walks out with a degree is much too small.

In fact, despite increasing numbers of high school graduates enrolling in college each year, the percent of college freshman that will leave school with a degree has changed little in almost four decades. And even for those who do complete college, it is taking longer. According to research by William Bowen, the former president of Princeton University, from 1968 to 2007 the college completion rate remained relatively constant while time-to-degree increased.²⁵

GROWING ENROLLMENT HAS NOT PRODUCED NEARLY AS MANY DEGREES



Source: US Census Bureau, Current Population Survey; and Bureau of Labor Statistics, "College enrollment up among 2009 high school grads," April 28, 2010. Historic percentage of 25-29 year olds completing a certificate or 2-year associate's degree not available in US Census Bureau, Current Population Survey tables.

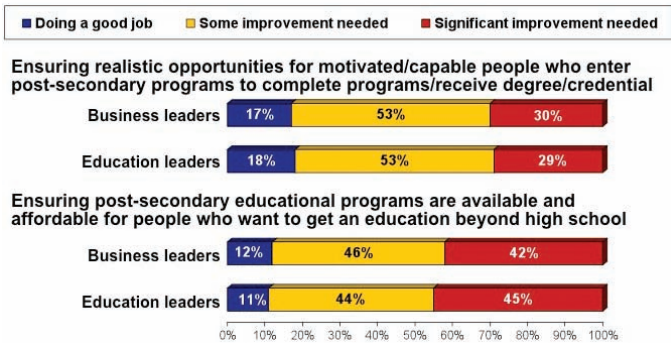
24 US Department of Education, National Center for Education Statistics. (2010). Digest of Education Statistics, 2009 (NCES 2010-013).

25 Bowen, W., Chingos, M., & McPherson, M. (2009). *Crossing the Finish Line: Completing College at America's Public Universities*. Princeton University Press. Princeton, New Jersey.

And that speaks to another false impression that plagues both business and education leaders. When they think about how to expand access to education, they focus on affordability, believing, most probably, that sticker price is what prevents many high school graduates from enrolling in college. But upon further examination, affordability has proven to be an impediment to both access *and* completion. Households with incomes in the bottom 40 percent of the earnings distribution (typically earning less than \$37,000 a year) need to spend about one-third of their income to send a student to a community college, and 43 percent of their income to enroll a student in a public four-year institution.²⁶ As a result, 45 percent of students at four-year institutions and 60 percent of students at community colleges work more than 20 hours a week; and more than one-quarter of community college students work more than 35 hours a

Affordability/access AND completion are of concern with both audiences.

How good a job is our nation doing on achieving these goals?



week. According to a Public Agenda survey of college dropouts, the leading reason (6 in 10) they left school was to support themselves financially, believing they could not balance both work and school.²⁷

More than four in five business leaders believe that our nation needs to make improvements in terms of both access/affordability (88%) and completion (83%). But they simultaneously believe that more *significant* improvements are needed to address problems with access and affordability than with post-secondary completion.

In sum, the most significant hurdle to closing the skills gap is not getting students from their high school graduation to the entrance to college. Rather, it is getting those who enroll in college to complete their degree.

A PICTURE OF THE BUBBLE WITHIN THE AMERICAN WORKFORCE

The frustration business leaders have today when trying to hire is well founded. The statistics compiled above reveal that a real chasm has developed between the demands of the nation's employers and the skills available in the American workforce. But the first step in working effectively to deflate the bubble is to address the misconceptions that underlie efforts to train future generations.

First, the nation's business and education leaders must realize that community colleges can play a much more important role in creating the workforce the nation needs than business leaders currently acknowledge. Since employers value the job-specific skills that certificates provide while students stand to potentially

26 Committee for Economic Development. (2005). *Cracks in the education pipeline: A business leader's guide to higher education reform*. Washington, D.C.

27 Johnson, J., Rochkind J., Ott, A., & DuPont, S. (2010). *With their whole lives ahead of them: Myths and realities about why so many students fail to finish college*. Public Agenda.



gain greater career benefits from two-year degrees, these findings reveal a clear opportunity for community colleges to re-imagine associate's degrees as inclusive of competency-based credentials. This would increase the value of associate's degrees to employers and the value of career earnings for students.

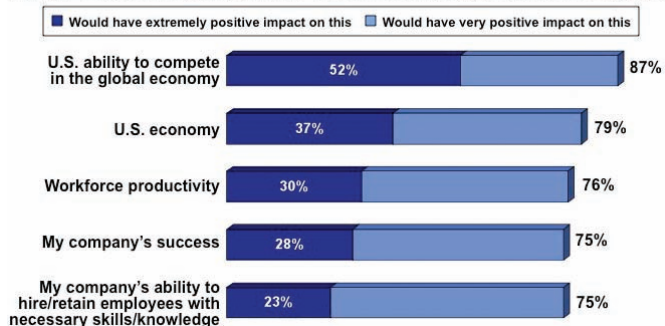
Second, the crisis of college dropouts—the legions of students who graduate from high school, enter college, but leave before earning a degree—needs to become a greater focus of those in a position to affect education policy. As we will see below, many businesses have already begun to invest, to great effect, in educating their employees while on the job. But much more needs to be done to ensure that the nation's educational institutions are poised to produce graduates with the skills and competencies businesses will demand in the years and decades to come.

A BLUEPRINT FOR REFORM

Business leaders readily link success in increasing post-secondary completion rates to the nation's ability to compete in the global economy. They also see educational competency as a crucial link to their own company's success—though they anticipate the effects to be less profound. Fully 87% of business leaders think that increasing the number of individuals who complete post-secondary education programs and receive a degree or credential will have a very positive impact on the United States' ability to compete in the global economy, including more than half (52%) who think it will have an extremely positive impact.

Business leaders link increasing post-secondary completion to the nation's global economic competitiveness.

Impact of Increasing Completion of Post-Secondary Education Programs



Moreover, more than three in four business leaders believe that increasing post-secondary completion will have an extremely or very positive impact on the U.S. economy (79%) and workforce productivity (76%). The large majority of business leaders also recognize the potential to affect both the success of their company (75% extremely/very positive impact) and their company's ability to hire and retain employees with the necessary skills and knowledge (75% extremely/very positive impact).

If we are to meet President Obama's goal of 8 million more graduates by 2020—restoring the U.S. to first place in the world

“I think businesses need to work with higher ed and say, here are the types of degrees we need. And businesses themselves need to offer internships. Students are much more likely to graduate, if they can see employment opportunities on the back end, if they get engaged within their profession, and if they're able to know that they have the training and skills required for successful employment upon completion of their degree.”

—Dr. Brian Noland, Chancellor, West Virginia Higher Education Policy Commission

in higher education attainment—it is going to take significant teamwork by the business and educational communities.²⁸ According to analysis of OECD data by The Pathways to Prosperity Project at Harvard University, the countries that have leapfrogged us in educational attainment have done so by offering more diverse pathways to higher education and incorporating employers into the process of preparing students for career readiness.²⁹

Countries offering sub-baccalaureate programs in which work and learning are integrated and in which students have a clear career goal in sight have had demonstrable results in increasing completion and job placement rates for young adults. In 2007, 80 percent of young adults in Germany found jobs within six months of completing their education compared to 48 percent in the U.S.³⁰

Integrating work and learning is important for another reason as well. More than 80 percent of education leaders we surveyed identified financial pressures, such as needing to work, as a major challenge to students completing a post-secondary degree or credential at their institution. And 42 percent of education leaders selected their students' need to work as the single biggest obstacle to improving post-secondary completion rates at their institution, echoing the findings of the Public Agenda survey.³¹ Compounding this challenge is that oftentimes the work students do outside the classroom to pay the bills has little relevance to the degrees for which they are studying, and so rather than enhancing their studies and increasing their motivation to finish their degree, it often becomes a competing priority for their time.

Ultimately, it will be crucial that American businesses work collaboratively with colleges and universities to make sure that they are producing graduates with the competencies required by the business community. With an eye toward deflating the bubble that currently exists between labor demand and supply, we need to learn what we can from what has already been created. Many companies dissatisfied with the educational levels of their employees are creating new programs to correct this, creating their own universities, institutes, and training programs, sometimes in collaboration with public colleges.

28 Obama, B. (August 9, 2010). Remarks by the President on Higher Education and the Economy at the University of Texas at Austin, The White House, Washington, D.C.

29 Pathways to Prosperity Project. (January 2011) Pathways to Prosperity: Meeting the Challenge of Preparing Young Americans for the 21st Century. Harvard Graduate School of Education, Cambridge, MA.

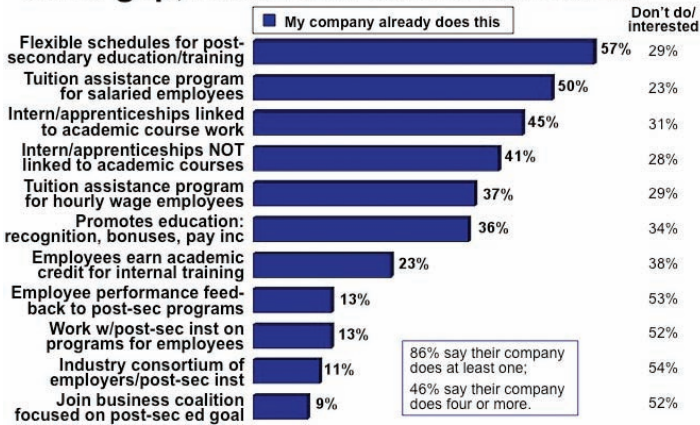
30 Ibid.

31 Johnson, J., Rochkind J., Ott, A., & DuPont, S. (2010). With their whole lives ahead of them: Myths and realities about why so many students fail to finish college. Public Agenda.

BUSINESSES TAKE STEPS TO MEET THE CHALLENGE

MANY AMERICAN BUSINESSES included in our survey have already begun to take steps to address the skills gap. As part of our survey, we tested eleven forms of engagement for employers, and fully 86% of business leaders indicated that their company was engaged in at least one of the eleven. Forty-six percent (46%) of business leaders said their companies were engaged in at least four. Smaller companies with 50 to 250 employees were the least likely to have engaged, but even 75% of them participated in at least one of the activities listed in the table below. Twenty-seven percent (27%) of leaders of these smaller businesses said their company engaged in four or more of the eleven activities.

Businesses are taking steps to address skills gap; interest in others is notable.



The concrete actions that businesses are most likely to be taking include: offering flexible work schedules to employees, providing a tuition assistance program for salaried employees, or offering internships or apprenticeships (both those linked to academic coursework and those not linked to academic coursework). Companies that are not already engaged in these sorts of efforts expressed strong interest in partnering with post-secondary institutions to address the skills gap.

American companies are least likely to be participating in activities or partnerships directly with post-secondary educational institutions, such as providing feedback to help higher education institutions improve their career preparation, or working with institutions one-on-one or through an industry consortium to develop cost-effective, company relevant certificate or degree programs for current employees. Nonetheless, more than half of employers expressed medium to high levels of interest in each. And it is not difficult to understand why. In 2008, U.S. companies spent \$56 billion on training and remediation for their employees suggesting partnerships which lower the cost of employee training can directly benefit businesses' bottom line.³²



“If the direct link between one’s educational pursuits and their career opportunities was clarified I think you’d have more people understanding the importance of focusing on their education and graduating on time with skills that prepare them for employment. Identifying young people early and guiding them through the curriculum that you feel will most benefit them by linking that to an offer of post-graduation employment might be one way to bring such clarity. Also, offering financial assistance during their education in exchange for some form of post-graduation employment commitment may be another tool.”

—Gray Kimel, President, Mideast Division, Vulcan Materials Company

EARN AND LEARN

In significant ways, employers around the country are realizing the impact they can have in creating the workforce they need through employee development. When forward-looking employers collaborate with education leaders, they can create opportunities for individuals to advance academically and along career pathways at the same time. Because these programs address a working student’s simultaneous need to earn a living, and get an education, they are collectively referred to as “Earn and Learn” models.³³

Earn and Learn models are collaborations between employers and post-secondary institutions that support attainment of post-secondary credentials. They differ from traditional

32 Training Magazine, (November/December 2008). Gauges & Drivers: Training Magazine’s Exclusive Analysis of the U.S. Training Industry. 2008 Industry Report.

33 The ‘Earn and Learn’ section of the report draws heavily on Walton, Peggy, (January 2011) From An ‘Ill-Prepared’ to A Well-Prepared Workforce: The Shared Imperatives for Employers and Community Colleges to Collaborate. Corporate Voices for Working Families. Washington, DC.

“ We need to couple what’s needed in the marketplace with a very thoughtful construct of what the path is for students to get there so they are aware of the opportunities that exist. This needs to start in middle and high school, so that students know there really is a future out there for them. We ought to take advantage of community colleges, and we do to a degree, but do it on a co-op basis where people can work and go to school and make it. Really, really important.”

—John Pepper, former Chairman and CEO, Procter & Gamble

workforce training in that their implementation depends on the successful cooperation of both businesses and post-secondary institutions. Also, because the goal is to enable an employee to earn a recognized post-secondary certificate or credential, the employer’s investment benefits the workforce as a whole, as well as the employee and the firm.

While colleges have long worked with employers to help prepare students for the workforce, it was rare in the past for a collaborative effort to be done outside a customized training contract or a business-specific course. However, with growing concern about the challenges of tapping skilled talent, and the related concern about educational attainment levels in the U.S., employers and post-secondary institutions have begun to recognize the opportunities they can seize by developing programs that share common standards and deliver college credit. Increasingly, employers are partnering with a wide range of educational institutions, including community colleges, public and private not-for-profit educational institutions, and for-profit career colleges to create a host of Earn and Learn models that both increase workforce skills among employees and support post-secondary completion for working students.

Earn and Learn models take a variety of forms depending on the particular employer and educational institution as well as the needs of the working learners involved. While there is no one-size-fits all approach, flexibility—both in the workplace and in the educational setting—are foundational practices that are important to the success of most Earn and Learn models because they enable the working learner to more readily combine education, work, and other responsibilities. Examples of workplace flexibility policies that support earning while learning include flexible scheduling for hourly workers, compressed work weeks, and teleworking; flexible and on-site course offerings and use of online learning are examples of flexibility on the education side. Building on this foundation, some of the most promising Earn and Learn models are described below.

- **Apprenticeship Programs:** Registered apprenticeship programs allow employees to learn an industry recognized skill and credential through on-the-job training with employers. According to the U.S. Department of Labor, there are more than 1,000 occupations that offer registered apprenticeships from “traditional industries such as construction and manufacturing, as well as new emerging industries such as health care, information technology, energy, and telecommunications.”³⁴ In addition to tax benefits and workforce development grants in some states, employers benefit from a pipeline of skilled workers with industry-specific skills. An example below is the Apprentice School at Northrop Grumman Shipbuilding.

- **Corporate Internships:** Internships have long been a way for high achieving students to develop job skills and entry-level networking to land their first job after college. Aware that these same benefits can be leveraged for low-income students trying to complete a degree, some regional colleges and businesses have formed partnerships to provide academic credit for internship work and some employers even pay interns. An example below is AOL’s partnership with Year Up.
- **Corporate Universities:** Some employers that regularly provide similar training to new employees have even gone so far as to establish their own institutions. So-called “corporate universities,” like McDonald’s Hamburger University, can create partnerships with accredited institutions to offer academic credit, or even confer degrees or credentials to employee students who successfully complete the program.
- **Cooperative Education:** Commonly known as a “co-op,” a cooperative education program awards students academic credit for structured, on-the-job experience. Students are both officially enrolled in an accredited degree or credential program and paid for work performed while earning academic credit. Co-op programs are only possible through close partnerships between employers and academic institutions. But like with apprenticeships, employers can benefit from developing workers with the direct skills needed for success at their particular firm.
- **Prior Learning Assessments:** Many post-secondary institutions are starting to recognize the important skills students learn on the job, and in turn, they have begun to develop ways to award credit if an enrolled student can demonstrate that they have already learned skills they would otherwise have to acquire in class. Some cutting edge employers are facilitating this process by encouraging and training employees prior to the learning assessment process, sometimes even paying for the assessment tests themselves to speed the accumulation of credits. An example below is Walmart’s Lifelong Learning Program.
- **Public/Private Partnerships:** Public/private partnership refers to collaborations by businesses, post-secondary institutions and/or public sector institutions to meet local workforce needs. Most often, public/private partnerships refer to a collaboration between a business and a post-secondary institution, working with local or state governments, to develop a training or certificate program. An example below is UPS’ Metropolitan College that is a partnership with Jefferson Community and Technical College (JCTC), the University of Louisville (UofL), and UPS.
- **Tuition Assistance Programs:** Probably the most common of the Earn and Learn models, tuition assistance programs allow

34 US Department of Labor. (2010). *Registered Apprenticeship: Earn, Learn, Succeed*. <http://www.doleta.gov/oa>

employers to reimburse students, or prepay tuition, for specific courses taken outside of work hours at accredited post-secondary institutions. Employees benefit from financial support for course work that can be applied towards a degree or credential and employers benefit from upgraded employee skills and a generous tax credit. According to IRS regulations, employers can contribute up to \$5,250 per employee per year on a tax-free basis. Examples below are Boeing and Verizon Wireless.

“Businessmen can have a significant impact on young people. When they visited schools and talked to the students about the importance of staying in school and doing well, it made a difference. [...] Big businesses, but particularly small businesses. When the guy they’re going to buy their Chevy from came in and said I don’t hire people who don’t have exceptionally high skills and I don’t hire mechanics without an associate’s degree, that made a big difference to these kids. They thought you could be a mechanic by taking a few auto shop courses.”

—David Longanecker, President, Western Interstate Commission for Higher Education



CASE STUDIES: BUSINESSES MAKING AN IMPACT

THE FOLLOWING EXAMPLES OF EMPLOYER EARN AND LEARN MODELS PROVIDE INSIGHT INTO THEIR ENORMOUS POTENTIAL FOR SUCCESS.

AOL

In order to help find skilled new hires, AOL partnered with Year Up, a one-year, intensive training program that provides urban young adults (age 18-24) with a unique combination of technical and professional skills, college credits, and an educational stipend and corporate internship, not only to fill its need for interns but to develop a pipeline of talented entry-level workers for the future.

When Year Up participants arrive at AOL for their six-month internship, they have already completed six months of rigorous classroom training around essential technical skills identified by AOL. During their training through Year Up’s National Capital Region office, interns are co-enrolled at Northern Virginia Community College, where they earn 18 hours of college credits. Interns also earn a weekly stipend to offset living expenses during the entire year. Once at AOL, they step into entry-level positions with the expectation that further internal training will quickly make them productive members of their IT, network operations, and desktop support teams.

Year Up is a non-profit organization funded by the fees charged to clients like AOL. Founded in Boston, Year Up now operates in

Atlanta, Chicago, Washington, DC, New York, Providence, and the San Francisco Bay area. In each region, Year Up partners with a post-secondary institution to award 18 college credits to interns for work accomplished during the six-month classroom training period.

To date, 1,845 young adults have completed the Year Up curriculum, with 85 percent obtaining a job earning \$30,000 a year within four months of completing the program. In addition, approximately 29 percent of Year Up graduates are enrolled in post-secondary institutions. In its own partnership with Year Up, AOL has found a diverse pool of skilled and highly motivated young people who are proving to be a source of vetted, entry-level talent.

Boeing

Boeing devotes substantial corporate resources to the development of both engineering and manufacturing talent by working closely with selected colleges and universities to enhance undergraduate curricula, support continuing education, recruit candidates for employment, and collaborate on research and development.

While U.S. schools graduate about 74,000 engineers in all disciplines each year, only 60,000 are American citizens capable of claiming a security clearance. For that reason, Boeing's ability to replace retiring Baby Boomers has become much more difficult.

To cultivate and recruit top-flight talent, Boeing works closely with over 170 colleges and universities and invests \$75 million dollars a year in employee learning. The company's Learning Together Program is an industry-leading tuition assistance program that allows employees at any level to continue their educational development at both four-year schools, and accredited technical and community colleges.

One such example is the Boeing Commercial Aircraft Training Governance Board & Aerospace Academic Alignment Team, which works to identify specific local community and technical colleges that have the proper curriculum and rigorous assessments. Boeing benefits because educational programs linked to the company's business can provide a pool of qualified candidates to support hiring needs.

Northrop Grumman

For Northrop Grumman Shipbuilding (NGSB), the Apprentice School fills the "mission critical" role of providing a reliable source of highly skilled, technical workers and future leaders in shipbuilding and repair. New apprentices, who must have a high school diploma or GED and be U.S. citizens with the ability to obtain a security clearance, are employed by NGSB with full benefits for their entire four- and five-year programs. They earn a starting hourly wage that progresses on a schedule by term completion, and graduates earn over \$50,000 in base salary.

Through its World Class Shipbuilder Curriculum, the Apprentice School offers academic instruction in 19 registered apprenticeship programs, including career training as a pipefitter, heavy metal fabricator, maintenance electrician, welder, and more. Because all programs are registered with the Virginia Apprenticeship Council, graduates receive journeyman credentials in their chosen craft or trade.

The school also offers six optional advanced programs in disciplines such as marine design and shipyard operations. Conducted in partnership with Thomas Nelson and Tidewater Community Colleges, these programs allow participants to earn their associate's degree in a related field. Impressively, more than 32 percent of a recent class of completing apprentices earned associate's degrees in addition to their journeyman trade credentials.

NGSB's investment of over \$100,000 per student at the Apprentice School is justified by the need to replace a retiring workforce equipped for the technological challenges of nuclear-powered shipbuilding. With 80 percent of graduates still employed after five years and 70 percent still employed after fifteen years, more than 2,700 graduates of the school are currently among the 21,000 employees of NGSB. Graduates of the Apprentice School continue to advance in their careers, serving in 240 different leadership jobs at NGSB with over 70 vice presidents, directors and senior managers in waterfront operations, engineering and design.

ACROSS THE GREAT DIVIDE MARCH 2011

UPS

When UPS, a \$45.3 billion corporation, began to consider whether to relocate its Next Day Air hub in Louisville, KY due to the difficulty of hiring and retaining skilled workers, city, county and state officials realized they needed to act fast. They formed a partnership with Jefferson Community and Technical College (JCTC), the University of Louisville (UofL), and UPS to create Metropolitan College, a fully accredited post-secondary institution founded to meet the workforce demands of UPS's operation. One of the region's largest employers, Metropolitan College is tuition-free for eligible Kentucky residents.

Metropolitan College students employed at UPS's Louisville hub are eligible for payment of up to 100 percent of their full-time undergraduate Kentucky resident-rate tuition as well as certain incidentals. UPS funds 50 percent of the tuition, while the public partners match 50 percent of tuition and infrastructure costs. In addition, students are free to study any discipline offered by JCTC or UofL.

From inception through spring 2009, more than 2,500 UPS employees have earned certificates, associate's degrees, bachelor's degrees, or advanced degrees through the Metropolitan College program. Most participants are the first in their families to complete a degree, and without the program might not have been able to attend or afford college.

Participating in the Metropolitan College consortium has helped UPS stabilize its workforce, decreasing its 100 percent turnover rate to a respectable 20 percent. Moreover, the Louisville region has benefited from an increase in the number of residents with post-secondary credentials.

Verizon Wireless

With 80 percent of its employees in retail and customer service jobs—entry-level positions that historically suffer from high turnover rates—Verizon Wireless wanted to stabilize its workforce while ensuring top-notch customer service. To that end, the company decided to leverage its comprehensive tuition assistance benefits program into an effort to increase retention, improve performance, and drive productivity by offering employees the opportunity to attain additional skills toward career advancement.

From their first day on the job, Verizon Wireless' new hires are encouraged to take advantage of Verizon's new benefits. The new hire orientation is called "Launch Your Success Story" during which employees are introduced to "Plan Your Career," a course that helps them set goals for themselves and measure their success against job opportunities within the company.

Verizon Wireless also directly supports academic attainment. Under the company's "LearningLINK" program, full- and eligible part-time employees can receive 100 percent prepaid tuition, textbooks and certain fees when they choose to take courses related to their current position or other career opportunities within the company. For full-time employees, the company covers up to \$8,000 per year; for part-time employees (working 20+ hours), benefits range up to \$4,000. During 2009, Verizon Wireless invested more than \$62 million in tuition assistance benefits.

After choosing to enroll, employees are supported and encouraged throughout their academic journey by supervisors and informal mentors. Frequently, in partnership with community colleges and universities, Verizon Wireless arranges for classes (many of which lead to college degrees) to convene on site at its 30 call centers and other corporate office locations. Each program supports a full-time, on site, academic dean, as well as a part-time university enrollment counselor.

In essence, employees benefit from the “purchasing power” derived from Verizon Wireless’ size, which enables the company to engage in articulation agreements or negotiated contracts with national education providers such as Strayer University, Bellevue University, and almost 100 local education providers. To help speed degree acquisition, Verizon Wireless also promotes prior learning assessment and accreditation of experiential learning.

More than 17,000 employees—20 percent of the company’s workforce—participated in the LearningLINK program in 2009, which resulted in more than 600 associate’s, bachelor’s, master’s and doctoral degrees earned. Verizon Wireless sees this as a valuable recruiting solution: 55 percent of program participants said the tuition assistance program was a factor in their decision to accept employment at the company. Internal metrics indicate that the program also serves as a strong retention tool because it reduces turnover by 50 to 60 percent among LearningLINK participants and graduates. Finally, company managers report improved job performance and behavior among the LearningLINK participants.

Verizon Wireless has created a comprehensive measurement process that reports dollar-based returns on investments in LearningLINK for corporate leaders. Through diligent measurement techniques, it has been shown that turnover cost savings cover LearningLINK expenses and generate additional savings to the business.

Walmart

With 1.4 million associates nationwide, Walmart wanted to help their associates complete post-secondary degrees but in a way that fit the Walmart business model and culture of using scale to lower cost. Walmart spent a year and a half developing an alternative to traditional tuition assistance programs that would meet Walmart’s four goals:

1. To help associates advance their careers at Walmart and beyond;
2. To grow Walmart’s talent pipeline;
3. To counter the perception that “retail jobs are dead-end jobs” by demonstrating the value of transferable skills that associates learn; and
4. To contribute to the President’s goal for America to regain its place among all nations as having the highest percentage of post-secondary attainment among 25-34 year olds by 2020.

Before deciding on the design of their new program, Walmart surveyed their associates to find out whether access to college was important to them and what program elements would increase their likelihood to participate. Associates overwhelmingly responded that they had a strong interest in continuing their education, and cited affordability and accessibility as the top two barriers. Associates said they wanted to be able to study a variety of different subjects, broader than those just related to their jobs at Walmart. And they needed flexible class scheduling to accommodate their work schedules and busy lives. In fact, a full 72 percent of survey respondents said they preferred studying online to attending a brick and mortar school.

With this insight into associates’ needs, Walmart evaluated 81 different colleges and universities before selecting American Public University as its preferred educational partner. APU, a leading online university with a strong history of service to America’s military personnel, fit the bill and fit Walmart’s business model by collaborating with Walmart to lower the tuition cost for employees, making the program more affordable.

Walmart’s Lifelong Learning Program, offered in partnership with American Public University, launched in June 2010 and immediately generated interest from Walmart’s employees. In the first six months following launch, over 550 retail associates have registered for college and are attending classes. The Lifelong Learning Program has three components: 1) APU offers all Walmart employees a 15% tuition grant, 2) Walmart employees can earn college credit at APU for their qualified on-the-job training, and 3) Walmart will be investing up to \$50 million to further reduce tuition costs for participating employees.

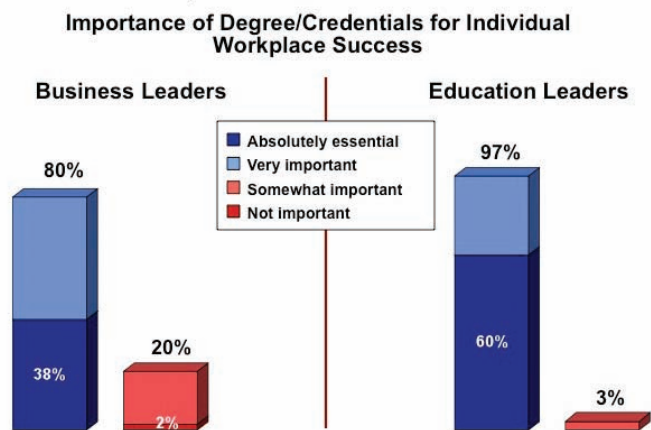
Walmart and APU are working closely together to document and review on-the-job learning in a number of critical positions at the company. To-date, over 300,000 associates are in a position identified as college credit eligible. For the positions reviewed so far, associates can earn from 3 to 30 college credits, and associates who have held more than one of these positions over the past 10 years can earn multiple credit grants. In total, through the Lifelong Learning Program associates could earn up to 45% of the credit required for an associate’s or bachelor’s degree, based on what they have learned on the job.

The APU degrees, which most closely align to credit for Walmart job learning, are the Associate in Management with a concentration in Retail Management and the Bachelor’s in Management with a concentration in Retail Management. But Walmart associates can choose among any degree APU offers and usually some credit for work experience can be applied towards those other degrees’ electives. In addition, as part of their relationship with Walmart, APU agreed to negotiate in good faith articulation agreements with any community college interested in participating in the program. Already Northwest Arkansas Community College, near Walmart’s headquarters, has joined the program, giving those students who wish to study in a classroom or transfer prior credits to APU’s program another affordable option.

BUSINESS AND EDUCATIONAL INSTITUTIONS SUPPORT REFORMS

FOR ALL OF THEIR EFFORTS, however, businesses cannot do the job alone—they need the cooperation of the nation’s educational institutions to deflate the bubble separating their needs with the skills on offer from the American workforce. In our survey, both business and education leaders recognized the importance of increasing the number of post-secondary degree holders in the U.S. Four in five business leaders believed that receiving a post-secondary degree or credential was absolutely essential (38%) or very important (42%) for an individual’s success in the workplace. Education leaders viewed a post-secondary degree or credential as even more critical: 60% thought it essential to achieve success in the workplace, and another 37% said it was very important.

Business and education leaders feel post-secondary degree/credential is important for individual workplace success.



Business and education leaders also agree that having a well-trained workforce is critical to America’s success in the global economy. When asked to select the most compelling argument for improving post-secondary completion rates, 75% of education leaders and 67% of business leaders identified the fact that we are falling behind our economic competitors as a grave concern. This natural competitiveness and loss of pride was more motivating than even the argument that a post-secondary degree has become the critical gateway to the middle class (47% of business leaders; 67% of education leaders).

Fortunately, business leaders and education leaders recognized the potential of various policies to achieve the goal of increasing the number of Americans with a post-secondary degree or credential.

Of the seven public policy proposals tested in the survey, business leaders expressed the most confidence in proposals to provide financial incentives to reward students for post-secondary degree completion, such as partial loan forgiveness or larger grant contributions (86%). This proposal addresses

The most compelling frame for increasing post-secondary completion links to America’s economic success.

% saying each is a very compelling argument	Business Leaders	Education Leaders
America’s success in the global economy depends on having a well-trained and well-educated workforce, and right now we are falling behind our most important competitors.	67%	75%
Recent research shows that obtaining a post-secondary degree or credential is increasingly becoming a critical gateway into the middle class. If there is no improvement in the number of individuals who fail to complete a post-secondary education, those individuals will be unable to earn at least a middle-class income and the nation’s economic stability and growth will be challenged.	47%	67%
Too many companies are unable to fulfill their needs for well-trained and well-educated workers who have the skills and knowledge that come from a post-secondary education.	32%	48%
Many students are taking out loans to enroll in post-secondary programs, but then they do not complete them, leaving the students saddled with debt but without the increased earning power a degree or credential would give them to help pay off that debt.	29%	42%
We are wasting our tax dollars to provide loans and grants to students who start post-secondary programs but never finish them, so we do not reap benefits from our investments in those students.	29%	15%
Evidence shows that taking a longer time to complete a degree is inefficient and wastes resources, driving up costs both to students and the institutions they attend.	21%	20%

affordability—an area in which business leaders feel that post-secondary institutions must improve.

They were also optimistic about the potential to increase post-secondary completion rates by instituting common core academic standards across both two-year and four-year colleges (88%) and all of the nation’s high schools (83%). This proposal touches on another major concern of business leaders: our nation’s high school graduates’ lacking the skills and knowledge for success in post-secondary education.

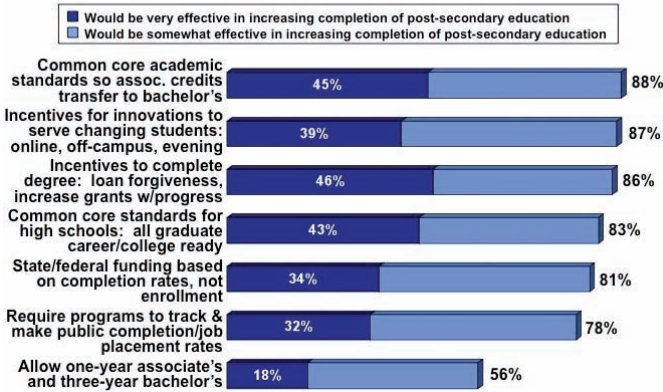
“I believe we have to have a more collaborative effort between the business community, the educational system, and government, whether that is state government, school district government, or national government. We have to have a more collaborative effort to recognize and identify where the shortcomings are and deal with them. A lot of people believe they know where the problems are, but we have not had the political courage to propose fact based solutions towards improving the overall education and educational accomplishments of the students in America.”

—William L. Hyde, Chairman of the Board of Trustees of the National Restaurant Association Educational Foundation

There is support for offering incentives to post-secondary institutions that are finding innovative ways to deliver education to a changing student population (87%), as well as basing federal and state funding for institutions partially on momentum toward completion rates rather than solely on enrollment (81%).

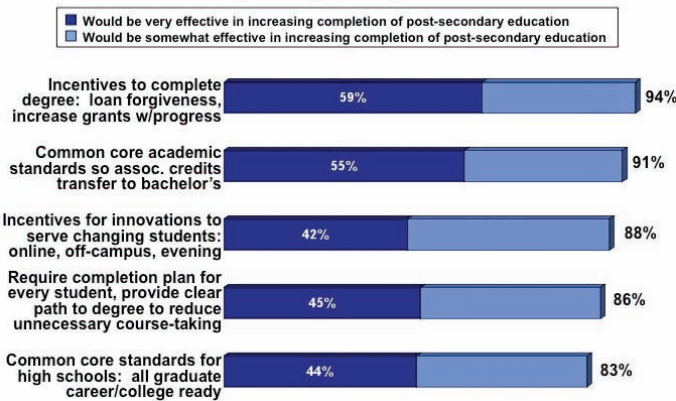
Many business leaders also believe that requiring post-secondary programs and institutions to track publicly both the on-time completion rates and job placement rates for each of their degrees would be an effective tool in policing quality (78%). Business leaders express the least enthusiasm for a proposal to offer one-year associate's degrees and three-year bachelor's degrees (56%).

Business leaders see potential for several policy proposals.



Education leaders as a whole endorsed many of the same policy proposals as the business leaders we surveyed. They registered an even greater intensity of support for rewarding post-secondary student success with incentives (94%) and common core academic standards across two- and four-year colleges (91%). In addition, most endorsed formal completion plans for every student and clear pathways to degrees (86%).

Education leaders are also optimistic about several policy proposals.



However, they were likely to favor different proposals based on the needs of their institution. Community college leaders supported student financial incentives (65%) and common core academic standards across two- and four-year colleges (72%). While career colleges were most likely to endorse requiring student completion plans (57%), tracking program completion and job placement rates (57%), student financial incentives (59%), and offering fixed block academic schedules that make it easier for students to schedule work around school (61%). Leaders of four-year institutions were the least keen on reforms with

only a majority supporting student financial incentives such as partial loan forgiveness or increasing grant awards with progress towards completion (56%)

Education leaders are optimistic about some policy proposals, by type of institution.

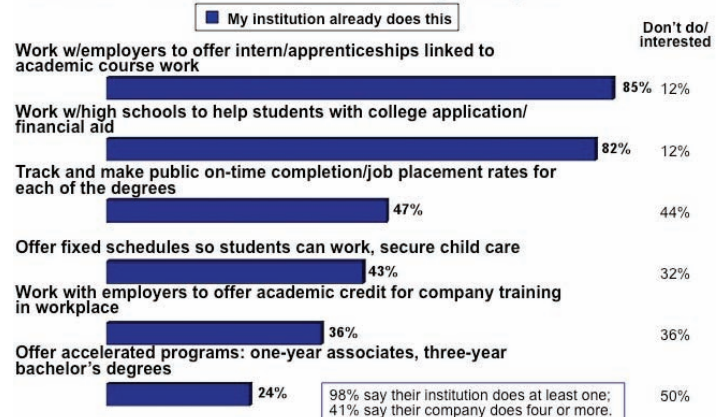
% very effective in increasing completion of post-secondary education

	All	Community/ Technical	Four Year	Career
Incentives to complete degree: loan forgiveness, increase grants w/progress	59%	65%	56%	59%
Common core academic standards across two-year/four-year institutions	55%	72%	46%	49%
Completion plans, clear path to degree	45%	50%	40%	57%
Common core standards for high schools, all students graduate career/college ready	44%	49%	39%	49%
Incentives for serving changing students: online, off-campus, evening	42%	43%	40%	43%
Incentives for full-time, acceleration	30%	30%	31%	27%
Require tracking completion/job rates	24%	18%	19%	57%
Fixed daily schedules to allow students to work	21%	19%	12%	61%
State/federal funding based on momentum & completion rates, not enrollment	21%	18%	19%	38%
Allow one-year associate's and three-year bachelor's	17%	19%	12%	35%

Some post-secondary institutions are already engaging in the sorts of approaches outlined in our survey. Nearly half of education leaders (47%) said their institution tracked on-time completion rates and job placement rates for each of their degrees, subsequently making those rates available to prospective students. Another 30% expressed a high level of interest in doing so at their particular college. One in four said their institution offered accelerated programs for one-year associate's degrees or three-year bachelor's degrees, and another 24% expressed a high level of interest in instituting such a program.

Fully 85% of education leaders said that their institution works with employers to offer internships that are linked to academic course work, and 82% said their institution works with local high schools to help students with the college application and financial aid process.

Post-secondary institutions are engaged and/or interested in taking steps.



GOVERNMENT MUST MEET THE CHALLENGE

In our survey, business and education leaders each expressed their belief that many players, including institutions of higher education, government, and employers, will all have to step up to the plate if the nation is to deflate the bubble. However, the two audiences had different perceptions of who, in particular, is most responsible for taking action. Beyond that, they differed in who they believe can have the greatest impact.

“Every profession has a responsibility to grow the next generation. You see this in practice in the medical field. You see this in education with student teaching and the induction of new teachers into the profession... the major business and industries of the world need to do that too. There are a few enlightened businesses like IBM that understand that and see value added in things that may be only marginally related to their profit line. But it needs to be a collective effort if you really want more people prepared with better STEM skills, because that’s what a lot of our new manufacturers are going to be needing... then they have to be part of the answer.”

—Joseph Frey, Deputy Commissioner for the Office of Higher Education with the New York State Education Department

Business leaders, for one, expressed a belief that a variety of players, including higher education institutions, government, and employers, all have the ability to have an impact on efforts to increase post-secondary completion rates.

Business leaders see a leading role for government, but a lesser role for employers.

Institution Has Single or Second Greatest Responsibility to Make Efforts to Increase Post-Secondary Completion

	Business leaders
Federal government	47%
Four-year public colleges/universities	44%
State government	41%
Post-secondary career, vocational, technical programs	25%
Two-year community colleges	24%
Employers	19%

Impact and responsibility are not necessarily aligned, however. Business leaders felt that post-secondary institutions (two-year, four-year, and career/technical) have the potential to have the greatest impact increasing the number of Americans who complete a post-secondary degree. Most also believed that the federal government and state governments can have a medium to large impact.

But business leaders, in particular, voiced a belief that the federal government, four-year public institutions, and state government have the greatest responsibility for undertaking efforts to increase post-secondary completion rates. Notably, while many business leaders recognized that employers can have a medium or major impact, just 19% thought employers have the single greatest or second greatest responsibility to undertake efforts to increase post-secondary completion.

Education leaders, on the other hand, expressed a belief that state governments have the greatest ability to affect post-secondary completion—and also that state governments have the greatest responsibility to do so. They ranked the federal government second in terms of responsibility.

Among the three types of education institutions, education leaders tended to think that two- and four-year institutions have both the ability and responsibility to improve post-secondary completion rates. By contrast, they believed that career and technical programs can have less impact and have the least responsibility.

Education leaders on who has the greatest responsibility to address post-secondary completion, by type of institution

Institution Has Single or Second Greatest Responsibility to Make Efforts to Increase Post-Secondary Completion

	All	Four-year	Community/technical	Career
State government	54%	62%	50%	35%
Federal government	47%	57%	33%	49%
Two-year community colleges	36%	23%	60%	22%
Four-year public colleges/universities	33%	43%	18%	25%
Employers	17%	10%	24%	26%
Post-secondary career, vocational, technical programs	13%	5%	15%	43%

Notably, leaders of each type of post-secondary institution placed more responsibility on their own category of institution to undertake efforts to increase completion rates:

- 49% of leaders at four-year public colleges and universities think those types of institutions have the greatest responsibility.
- 60% of community college leaders think that community colleges have the greatest responsibility
- 43% of leaders at career and technical institutions think those institutions have the greatest responsibility

When it comes to policy proposals to engage American businesses in direct efforts to increase the number of post-secondary degree holders (such as tuition assistance programs, internships, partnerships with post-secondary institutions,

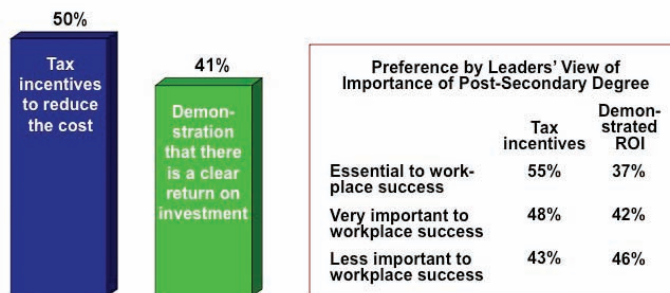
etc.), business leaders expressed a slight preference for tax incentives to reduce the costs of participation (50%) over clearer demonstrations that Earn and Learn-type programs provide a direct return on investment (41%). Business leaders who felt that a post-secondary degree or credential is absolutely essential to workplace success preferred tax incentives by a larger margin (55% tax incentives, 37% demonstration of clear return on investment) than those who said a post-secondary degree or credential is somewhat or less important (43% tax incentives, 46% clear return on investment).

“Everybody has to share in the expense. For sure, the government has to step up but industry has to step up as well. It’s up to industry. If we’re not being provided with the required supply [of skilled employees], then we’ve got to go out and help fix the problem... I think there’s a movement now that I’ve never seen in industry, whereby people are energized to help get the young, the youth of America get certified, so that they can serve long-term.”

—Lt. Gen. Dave Ohle, Defense Operations and Integrations Sector Manager at Alion Science and Technology

Engaging Business: Tax incentives have a slight edge over demonstrated ROI.

Which of these factors would increase your company’s likelihood of offering incentives/opportunities for post-secondary education?



PATHS FORWARD

One of the key lessons learned from our survey work and our conversations with business and post-secondary leaders is that the path forward requires teamwork and asks all of us to challenge our assumptions about how well what we do today helps us meet our goals for tomorrow. We will not produce 8 million additional graduates by the end of the decade simply by finding more students to enroll in post-secondary education. Our only choice, to be first in the world in educational attainment again, is to improve the outcomes for students today.

“In the long term,... the best way by far to improve economic opportunity and to reduce inequality is to increase the educational attainment and skills of American workers. The productivity surge in the decades after World War II corresponded to a period in which educational attainment was increasing rapidly; in recent decades, progress on that front has been far slower.”³⁵

—Ben Bernanke, Chairman, The Federal Reserve Board of Governors

Nor can we afford to ignore the issue. Education has been a major engine of economic growth in the United States in the post-war era. By some estimates “increases in a country’s average

level of educational attainment by one year can generate sizable increases in annual economic growth—as much as 6 to 16 percent.”³⁶

The path forward is clear. We must recognize the value of career credentials and associate’s degrees, we must re-imagine how these degrees are offered and the role of employers in helping students ‘earn and learn,’ we must create incentives for students, post-secondary institutions, and businesses that recognize the completion goal and reward success, and we must be able to measure our efforts to ensure we are accountable for achieving the goal.

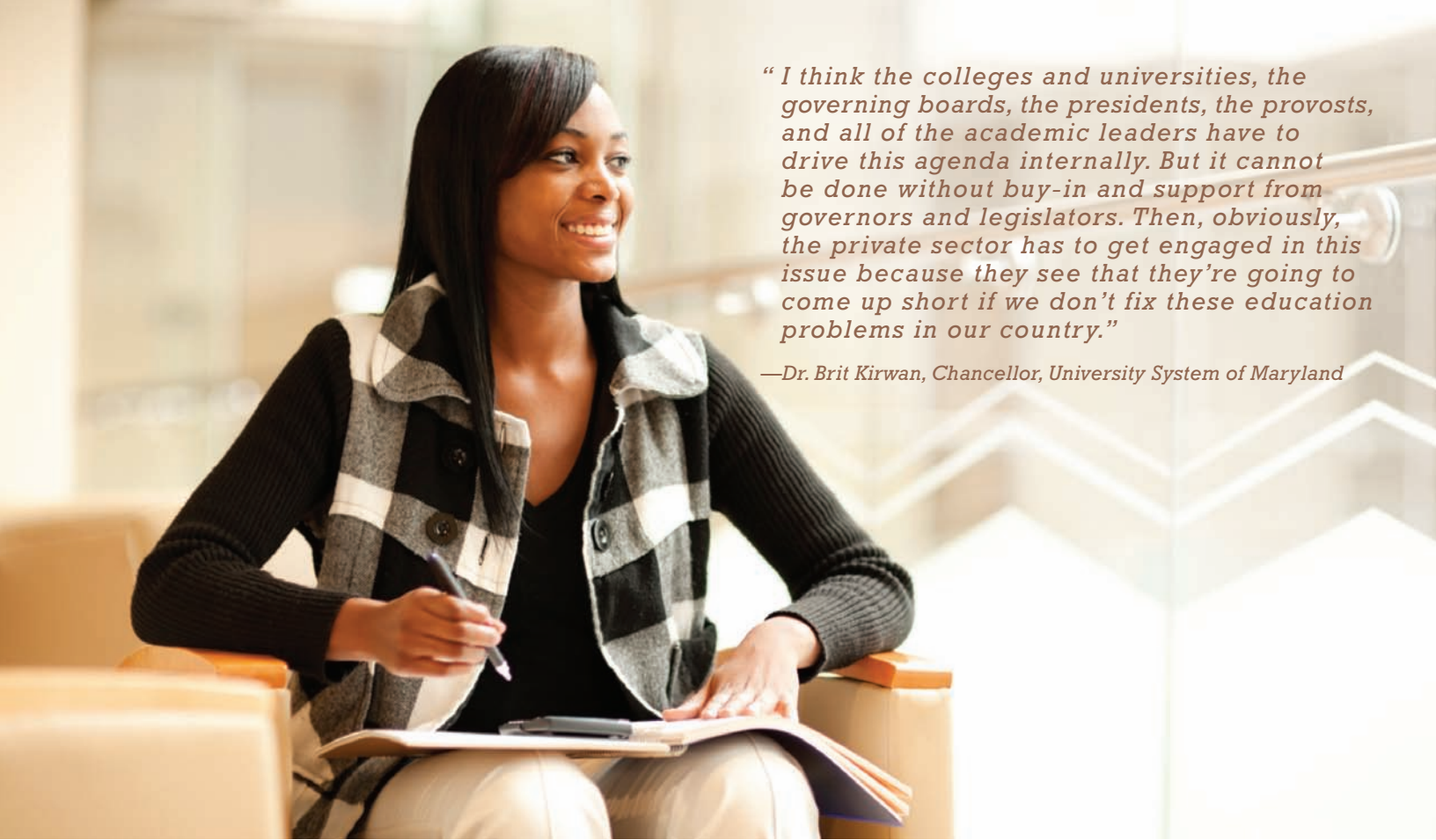
CREDENTIALS COUNT

Employers, especially smaller companies which employ the majority of the workforce, value career credentials and view them as reliable indicators of career knowledge and skills. These short-term degrees that are quick to complete can also be powerful building blocks for students seeking to attain a longer-term degree such as an associate’s degree or bachelor’s degree, but only if students are allowed to ‘ladder’ these credentials towards attaining a higher degree.

For this to happen, business leaders need to be able to articulate what skills they need graduates to earn, and community colleges need to be focused on re-imagining associate’s degrees as

³⁵ Bernanke, B. (June 4, 2008). . At Harvard University, Cambridge, Massachusetts.

³⁶ Committee for Economic Development. (2005). *Cracks in the education pipeline: A business leader’s guide to higher education reform*. Washington, D.C.



“I think the colleges and universities, the governing boards, the presidents, the provosts, and all of the academic leaders have to drive this agenda internally. But it cannot be done without buy-in and support from governors and legislators. Then, obviously, the private sector has to get engaged in this issue because they see that they’re going to come up short if we don’t fix these education problems in our country.”

—Dr. Brit Kirwan, Chancellor, University System of Maryland

inclusive of competency-based credentials and recognize that some students may need to step off the path to a higher degree from time to time to work. Allowing students to obtain industry certifications leading up to an associate’s degree enables students to step off the path to work after achieving a credential, but also gives them an incentive to return to complete their degree since they do not have to start over. Moreover, it ensures that associate’s degrees indicate real career value and job skills to employers and job seekers heading into the workplace.

FOSTER BUSINESS AND COMMUNITY COLLEGE PARTNERSHIPS

It is crucial that American businesses work collaboratively with community colleges, and other associate’s degree granting institutions, to ensure that they are producing graduates with the competencies required by the business community. The successful “Earn and Learn” models outlined in this report provide the roadmap for how these partnerships could work. Examples such UPS’ partnership with Jefferson Community and Technical College and the University of Louisville, and Walmart’s partnership with American Public University increase workforce skills among employees and support post-secondary completion for working students. Expanding on these efforts will be vital to building the 21st century workforce that meets the demands of the future.

CHANGE OUR VERNACULAR

Too often we set the four-year degree apart from other post-secondary degrees by including only the former in the term

“college.” As our survey revealed, 98 percent of business leaders say that they imagine a four-year degree when someone mentions college. Just 13% think of a two-year associate’s degree, and only 10% say a mention of college conjures thoughts of a career or technical credential.

The reality is while the majority of post-secondary students attend four-year institutions, nearly 40% of post-secondary students are enrolled in two-year institutions or less than two-year institutions.³⁷ And many post-secondary students have jobs, and sometimes even children, to balance while they go to school. Forty-five percent of students at four-year institutions and 60 percent of students at community colleges work more than 20 hours a week; and more than one-quarter of community college students work more than 35 hours a week. The classic movie-depicted college experience with dorm rooms, grass lawns, and ivory towers applies to just one-quarter of college students.³⁸

The best way to ensure that the majority of workers can contribute to and share in the nation’s economic prosperity is to increase the number of post-secondary graduates. Including degree attainment as part of our understanding of “college” could be an important step in elevating the value of career credentials and two-year degrees.

GET TRANSFERS RIGHT

Increasing the number of associate’s degree holders is an important and worthy goal, particularly given the strong job growth for these degrees in the coming decade, but that does

³⁷ United States Department of Education, National Center for Education Statistics. (2010). Digest of Education Statistics, 2009 (NCES 2010-013).

³⁸ Johnson, J., Rochkind, J., Ott, A., & DuPont, S. (2010). *With their whole lives ahead of them: Myths and realities about why so many students fail to finish college*. Public Agenda.



INCENT COMPLETION, NOT JUST ENROLLMENT

If we are going to move from a higher education system focused on access to one focused on both access *and* completion, we will also need to examine and re-align incentives to ensure students, post-secondary institutions, and employers are focused on, and rewarded for, increasing graduation rates. Examples of incentives that reward completion are:

- **Partial loan forgiveness for students who persist and graduate or increases in Pell grant contributions to eligible students as they progress through their courses and ultimately earn a degree or credential.** Studies suggest students respond positively to financial incentives to complete their degrees. Research finds “that additional student financial aid dollars are associated with higher graduation rates, even after controlling for appropriation levels” to schools, demonstrating a dollar given directly to a student may have an even greater impact on graduation than a dollar given directly to a school.³⁹
- **Performance funding for post-secondary institutions that aligns public spending on higher education with a state’s goals for workforce development and economic growth.** Most state higher education budgets are derived from past funding levels, student enrollment, and automatic increases for expenditures such as employee benefits and pay raises. While enrolling more students may increase an institution’s budget, graduating students is rarely taken into consideration even though it is the goal of higher education institutions. This kind of budgeting, divorced from performance, does not give institutions any strong incentives to improve their completion rates. Performance-based funding links a portion of a post-secondary institution’s budget to the level of improvement in the institution’s graduation rate.
- **Tax incentives for businesses to reduce the cost of ‘Earn and Learn’ programs.** In our survey, business leaders reported they were more likely to engage in direct efforts to increase the number of post-secondary degree holders (such as tuition assistance programs, internships, partnerships with post-secondary institutions, etc.) if they were offered tax incentives to reduce the costs of participation.

MEASURE SUCCESS (AND FAILURE)

It almost goes without saying that we must be able to measure graduation rates to ensure we are accountable for improving them. But ‘official’ graduation rates are problematic. The most widely used, and legislatively defined graduation rate, comes

not mean community colleges shoulder the entire burden for increasing post-secondary attainment. Since both students and employers see a bachelor’s degree as having the highest return on investment, making transfer agreements more transparent, better structured, and tightly articulated to high-value bachelor’s degree pathways is critical as well.

In our survey, both business and education leaders overwhelmingly supported common core academic standards, such as in articulation agreements, across two-year and four-year colleges so that students could transfer college credits from associate’s degrees to bachelor’s degrees. Articulation agreements align degree requirements between a state’s two-year and four-year institutions. For example, Florida’s “2+2 Articulation Agreement” guarantees admission and full credit transfer into a 4-year state university after completing an associate’s degree at a public Florida community college or career center.

Articulation agreements benefit all students, not just community college students, because with clearer pathways more students can start at more affordable community colleges and transfer to four-year colleges to earn a bachelor’s degree.

“In IBM’s partnerships with colleges and universities, and specifically with the multi-campus City University of New York, we have discovered that smarter data analytics tools can isolate key early warning indicators to more accurately predict potential college dropouts. Some of these include students who are taking multiple remedial courses, especially math, and poor school attendance rates. With this data in hand early on, it is possible to intervene within two weeks of the beginning of the first semester. If implemented nationwide, data analytics could identify these early signs, and then allow us to intervene promptly to address them, boosting post-secondary completion rates significantly.”

—Stanley S. Litow, Vice President for Corporate Affairs and President of the IBM Foundation

39 Doyle, W. (2010). Open-Access Colleges Responsible for Greatest Gains in Graduation Rates. The National Center for Public Policy and Higher Education: Making the Connections. San Jose, CA

from the Student Right-to-Know (SRK) and Campus Security Act (Public Law 101-542) of 1990. SRK requires “that all colleges report graduation rates to the National Center for Education Statistics (NCES) for their students to receive federal financial aid. The SRK graduation rate is defined as the percentage of that cohort of fulltime beginning students that graduate in 150 percent of the ‘expected’ time that it should take to complete a degree. For a bachelor’s degree, which traditionally has taken four years, the SRK graduation rate is therefore based on graduation within six years.”⁴⁰

The result is that post-secondary graduation rate data collected by the U.S. Department of Education’s Integrated Postsecondary Education Data System (IPEDS) only accounts for “48 percent of all undergraduates enrolled in four-year public institutions and 32 percent of those enrolled in two-year public institutions.”⁴¹ In other words, the majority of students at public institutions are not being tracked at all.

IPEDS data does not include part-time students, which represent “37 percent of all college students, 61 percent of public two-year college students, and more than 40 percent of all black and Hispanic students.” And despite estimates that 37 percent of

students who earn a bachelor’s degree attend more than one institution, IPEDS also does not include transfer students.⁴²

And that’s just what’s missing. The data IPEDS does contain does not tell us very much about the students it does track. It does not tell us for example whether students are from low-income families or remedial students. It is very difficult to measure the effectiveness of the \$18 billion annual investment in Pell grants to low-income students if we do not know how many students the program has actually helped graduate. States collectively spend up to \$1 billion annually on remedial education courses, almost two-thirds of community college students take at least one, but fail to track whether these courses are successful in preparing students to graduate.⁴³

The National Governors Association’s Complete to Compete initiative, spearheaded by Washington Governor Chris Gregoire, has proposed guidelines for common completion metrics, which would address many of these issues and provide useful data to policymakers and institutions about student progress and outcomes. Details of the proposed data metrics can be found at, www.nga.org/ci.

CONCLUSION

By challenging the nation to re-establish its global preeminence in the rate of college completion, President Obama highlighted a goal that gets to the heart of one of America’s most pressing needs: building a 21st century workforce that meets the demands of the future. The great divide that currently leaves unemployed workers without the skills necessary to meet the needs of the nation’s employers must be bridged. Already, businesses and educational institutions are responding. Businesses, eager to empower their employees, are working help them complete the degrees and credentials they need. And colleges are molding their programs to the realities of student life and the demands of local employers.

But much more needs to be done. Today, we know what the nation’s businesses will require in the decades to come, and we know what employees will need to succeed. The questions that remain unanswered are whether Americans will keep focused on the demands of competition in the global economy, and whether we will continue to build the pathways to success that will drive American growth through the 21st century. The future of millions of Americans and the strength of our economy are at stake.

⁴⁰ Hess, F. et al. (2009). *Diplomas and dropouts: Which colleges actually graduate their students (and which don’t)*. American Enterprise Institute. Washington, D.C.

⁴¹ Reyna, R. (2010). *Complete to Compete: Common College Completion Metrics*. NGA Center for Best Practices: Education Division.

⁴² Ibid.

⁴³ Ibid.



ACKNOWLEDGMENTS AND NOTES

The authors would like to give special thanks to Megan Hoot, Molly Farren, Christopher Wagner, Rebecca Friant, Kahlie Long, and Serena Zhang of Civic Enterprises; Donna Klein, John-Anthony Meza, and Peggy Walton of Corporate Voices for Working Families; Geoff Garin, Abigail Davenport, John Whaley, and Julia Holup of Peter D. Hart Research Associates; Cheryl Oldham and Rosemary Lahasky of the U.S. Chamber of Commerce; and Marc Dunkelman for the creative and cooperative effort that led to this report. The authors would also like to thank Don Gura Graphic Design for designing this report.

In addition, the following organizations provided invaluable advice, assistance with our survey instrument, or participated in our initial project convening meeting in April 2010. Many of the ideas from that session served as inspiration for this report.

Alliance for Excellent Education

American Association of Community Colleges

American Association of State Colleges and Universities

America's Promise Alliance

Association of Private Sector Colleges and Universities

The Business Roundtable

Center for American Progress

Complete College America

The Conference Board

Founders Fund

Margaret Spellings and Company

National Association of Manufacturers

National Minority Business Council

Pearson Foundation

United Way

Year Up

The views reflected in this document are those of the authors and do not necessarily reflect the views of The Bill & Melinda Gates Foundation, which commissioned this report, or any of the above mentioned organizations.

APPENDIX

Peter D. Hart Research Associates conducted two surveys in September 2010:

From September 7 to 16, 2010, Hart Research conducted a national online survey among 450 business leaders at companies with 50 or more employees. Respondents included C-suite level executives, senior vice presidents, officers, and vice presidents at companies across sectors.

From September 10 to 22, 2010, Hart Research conducted a national online survey among 751 leaders of post-secondary institutions. Respondents included Presidents, Chancellors, CEOs,

Provosts, and other officers of community colleges, private sector colleges and universities, and less selective four-year colleges and universities.

Peter D. Hart Research Associates and Civic Enterprises also conducted 25 in-depth interviews among business and post-secondary education leaders from September 20th to October 13th, 2010. Twelve interviews were conducted among business leaders, and thirteen took place among post-secondary education leaders. Selected quotes from these interviews appear throughout this report.

BIBLIOGRAPHY

- Balfanz, R., Bridgeland, J., Moore, L., & Hornig Fox, J. (November 2010) *Building a Grad Nation: Progress and Challenge in Ending the High School Dropout Epidemic*. Civic Enterprises, Everyone Graduates Center at Johns Hopkins University, and America's Promise Alliance.
- Bernanke, B. (June 4, 2008). *Remarks on Class Day 2008*, At Harvard University, Cambridge, Massachusetts.
- Bowen, W., Chingos, M., & McPherson, M. (2009). *Crossing the Finish Line: Completing College at America's Public Universities*. Princeton University Press. Princeton, New Jersey.
- Bridgeland, J., Dilulio, Jr., J., & Morison, K. (March 2006) *The Silent Epidemic: Perspectives of High School Dropouts*. Civic Enterprises, Washington, D.C.
- Carnevale, A. (March 20, 2009) *Valuing Certificates: Defining the Value of Certificates*. Center on Education and the Workforce, Georgetown University, Washington, D.C.
- Carnevale, A., Smith, N., & Strohl, J. (2010). *Help Wanted: Projections of Jobs and Education Requirements Through 2018*. Center on Education and the Workforce. Georgetown University, Washington, D.C.
- Committee for Economic Development. (2005). *Cracks in the education pipeline: A business leader's guide to higher education reform*. Washington, D.C.
- Doyle, W. (2010). *Open-Access Colleges Responsible for Greatest Gains in Graduation Rates*. The National Center for Public Policy and Higher Education: Making the Connections. San Jose, CA.
- Georgetown University Center on Education and Workforce, *College is Still the Best Option*, <http://www9.georgetown.edu/grad/gppi/hpi/cew/pdfs/college%20still%20best%20option.pdf>
- Gordon, E. (2009). *The Global Talent Crisis, The Futurist*.
- Hess, F. et al. (2009). *Diplomas and dropouts: Which colleges actually graduate their students (and which don't)*. American Enterprise Institute. Washington, D.C.
- Jantti, M., et. al. (2006). *American Exceptionalism in a New Light: A Comparison on Intergenerational Earnings and Mobility in the Nordic Countries, the United Kingdom, and the United States*. Discussion Paper 1938. Bonn.
- Johnson, J., Rochkind J., Ott, A., & DuPont, S. (2010). *With their whole lives ahead of them: Myths and realities about why so many students fail to finish college*. Public Agenda.
- The National Center for Public Policy and Higher Education. (2010). *Measuring Up 2008: The National Report Card on Higher Education*.
- Obama, B. (August 9, 2010). *Remarks by the President on Higher Education and the Economy at the University of Texas at Austin*, The White House, Washington, D.C.
- Organization for Economic Co-operation and Development. (2007). *Education at a Glance 2007: OECD Briefing note for the United States*.
- Pathways to Prosperity Project. (January 2011) *Pathways to Prosperity: Meeting the Challenge of Preparing Young Americans for the 21st Century*. Harvard Graduate School of Education, Cambridge, MA.
- Reyna, R. (2010). *Complete to Compete: Common College Completion Metrics*. NGA Center for Best Practices: Education Division.
- The Spring Board Project. (2009). *Getting Ahead, Staying Ahead: Helping America's Workforce Succeed in the 21st Century*.
- Stangler, D. & Litan, R. (2009). *Where will the jobs come from?*, Kauffman Foundation.
- Training Magazine, (November/December 2008). *Gauges & Drivers: Training Magazine's Exclusive Analysis of the U.S. Training Industry*. 2008 Industry Report.
- United States Department of Education, National Center for Education Statistics. (2010). *Digest of Education Statistics, 2009* (NCES 2010-013).
- United States Department of Labor. (2010). *Registered Apprenticeship: Earn, Learn, Succeed*. <http://www.doleta.gov/oa>
- Walton, Peggy. (January 2011) *From An "Ill-Prepared" to A Well-Prepared Workforce: The Shared Imperatives for Employers and Community Colleges to Collaborate*. Corporate Voices for Working Families. Washington, DC.

