Educating the 21st Century Workforce

The Views of Chief Human Resource Officers Regarding Workforce Development

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HR Policy Association and Workforce Development

HR Policy Association represents the chief human resource officers (CHROs) of more than 300 of the largest companies doing business in the United States. Most HR Policy member companies operate globally; collectively, they employ more than 20 million people worldwide. In the United States, they employ approximately ten million employees, nearly nine percent of the private sector workforce.

As CHROs, Association members are responsible for hiring, training, promotion, and succession. They are keenly interested in and ultimately accountable for a well trained, skilled, and appropriately educated workforce. Simply put, our members are in the best possible position to understand how to expand employment opportunities in the private sector.

Association members are concerned that governmental and academic institutions are being outpaced by the accelerating rate of change in the world economy. The types of products and services that consumers desire are constantly changing, as are the processes and technology used to provide them. Workers and their employers are scrambling to keep up.

Our members believe that the dynamic economy of the 21st century requires a fundamental restructuring of the way employers interact with the academic community and with government training and education policy makers. All three communities must become far better aligned in creating the conditions necessary to promote job growth and employment security.

In the spring of 2010, HR Policy Association formed a committee of key members interested in offering their unique perspectives and constructive comments to the policy makers, academic community, and other stakeholders in order to better prepare, train, and educate the American workforce of the future.

This report contains the committee's findings. Internal data included in the report is drawn primarily from a February 2010 HR Policy Association membership survey (139 members responded). Other internal findings and anecdotes cited in the report are from CHRO member responses during roundtable discussions at the HR Policy Association's March 2010 membership meeting, and from eleven four-hour long focus groups involving more than 100 chief human resource officers around country.

I. Executive Summary

As the chief human resource officers at their companies, HR Policy Association members are responsible for recruitment, training, promotion, and succession planning. Therefore, they are keenly interested in and ultimately accountable for a well trained, appropriately educated workforce.

The United States is being severely challenged by the economic forces sweeping the globe. To compete, it is imperative that companies operating in today's marketplace maintain a knowledge-based workforce committed to continual learning and skills development.

Association members are finding that all too many graduates entering the workforce have not developed the skills necessary to succeed immediately in the workplace. It would be nearly impossible to catalogue all the programs, resources, and initiatives that large employers are devoting to reverse this trend among America's new workforce entrants. In 2010 alone, the private sector devoted approximately $53 billion toward job training—53 percent of total job training spending in the United States.

But to keep up with the employment growth countries like China, India, and Singapore are experiencing, there needs to be a fundamental restructuring of the way employers interact with the academic community and government policymakers. These key stakeholders must become far better aligned in creating the conditions necessary to promote and develop a workforce prepared to compete in today's world. In meeting the challenges of the 21st century, HR Policy Association members believe that:

- the ability of their companies to compete will depend heavily on whether they have knowledge-based workforces that can nimbly adapt to emerging markets, new technologies, and rapidly changing business environments;
- emerging countries with high rates of growth tend to place higher priority than the United States does on creating a robust economic environment;
- American teachers are facing unprecedented challenges in the classroom in preparing K-12 students for life after school;
- the United States educational system is having difficulty producing graduates with the requisite skills to staff the jobs of the 21st century;

- the nation's educators and policymakers do not seem to fully appreciate the accelerating rate of change in how work is done and the skills workers need to keep up with that pace of change;
- employers are having to spend far too much to train recent graduates in basic literacy and communication skills that they should already have learned;
- it is imperative for both our standard of living and our national security to produce far more American graduates with science, technology, engineering, and math skills;
- not all well-compensated jobs require a four-year college degree; even during this period of high unemployment, many employers are having difficulty filling well-paid trades positions;
- to promote employment growth successfully in the United States, educational curricula must be better aligned with the needs of employers; and
- workforce development resources of the federal government need to be more in tune with contemporary workforce needs if they are going to have a positive impact.

HR Policy members believe that our governmental and academic institutions are being outpaced by the accelerating rate of change in the world economy. The types of products and services consumers want are constantly changing, as are the processes and technologies used to provide them – and workers and their employers are scrambling to keep up. In light of the dynamic economy of the 21st century, there must be a fundamental restructuring of the relationship between the key players in workforce development. Employers, academia, and policymakers must become far better aligned in confronting the realities and challenges of today's workplace and in creating the conditions necessary to promote long-term job growth and employment security.

II. Introduction

HR Policy Association represents the chief human resource officers of more than 300 of the largest companies doing business in the United States. Most HR Policy member companies operate globally, and the aggregate number of people they employ is more than 20 million worldwide. In the United States, they employ approximately ten million employees, nearly nine percent of the private sector workforce.

As chief human resource officers, they are responsible for hiring, training, promotion, and succession planning among many other responsibilities. Therefore, they are keenly interested in and ultimately accountable for a well-trained, appropriately educated workforce. Most large employers sponsor extensive education and training programs for their employees, and many support external initiatives with financial and in-kind services. All these activities will become even more critical in the coming decades, as economies become more global and technology becomes more pervasive. The ability of companies to compete will depend heavily on whether they have a knowledge-based workforce committed to continual learning and skills development and characterized by the ability to adapt quickly to emerging markets, new technologies, and constantly changing business environments.

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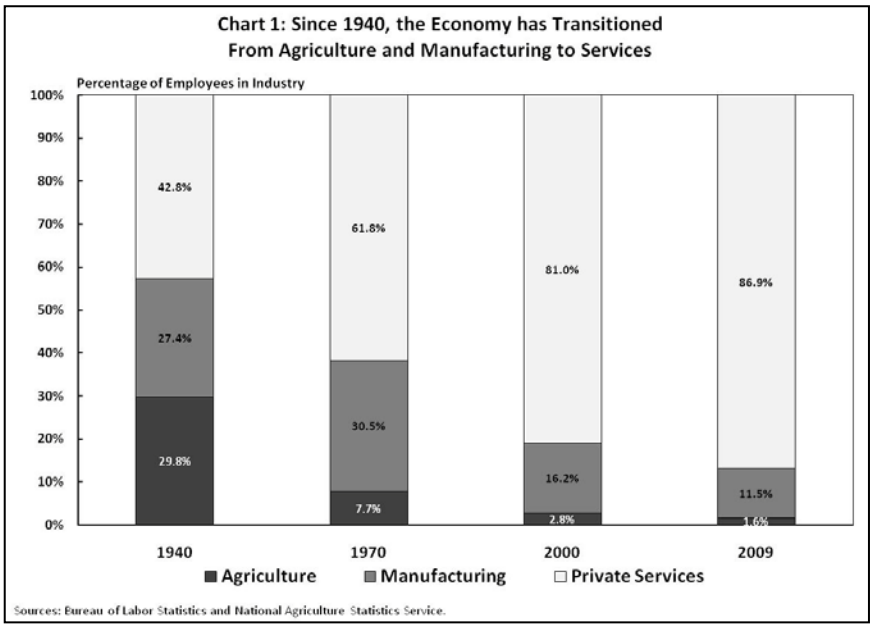
President Obama highlighted this nexus between workforce education and the country's economic health in a recent speech at a leading American university. "It's an economic issue when the unemployment rate for folks who've never gone to college is almost double what it is for those who have," he said.[1] "It's an economic issue when nearly eight in ten new jobs will require workforce training or a higher education by the end of this decade. It's an economic issue when we know beyond a shadow of a doubt that countries that out-educate us today will out-compete us tomorrow."

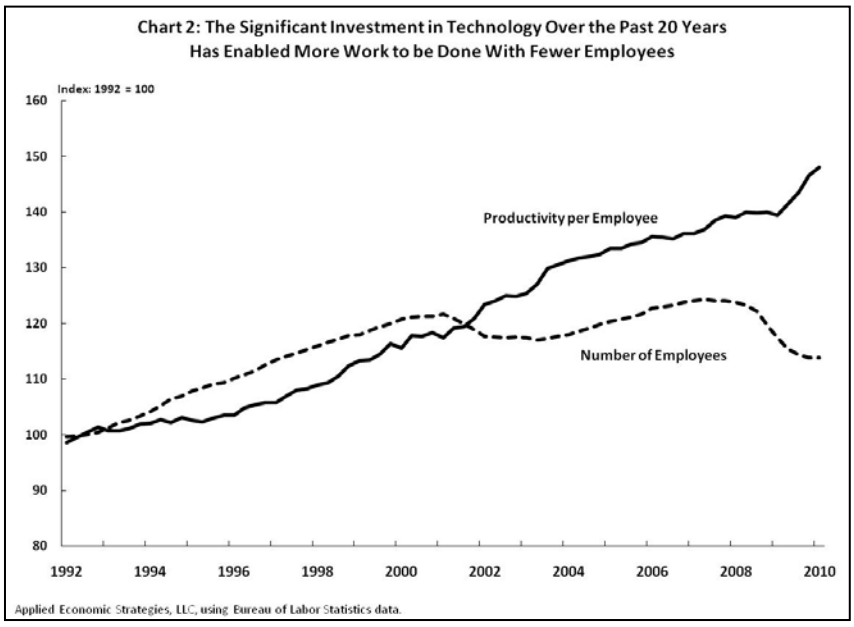
The United States is being severely challenged by the economic forces sweeping the globe. We see the impact of these forces in chronic high unemployment, slow economic growth, and the reluctance among employers to hire new workers or expand stateside operations in the midst of this uncertainty.

This, of course, is not the first significant social and economic change that has swept the economy. Since the late 18th Century, the American economy has evolved from agrarian to industrial and on to the present age, which is characterized by rapidly changing global markets and a profound reliance on technology. For example, the percentage of Americans employed in manufacturing has shrunk from 21 percent in

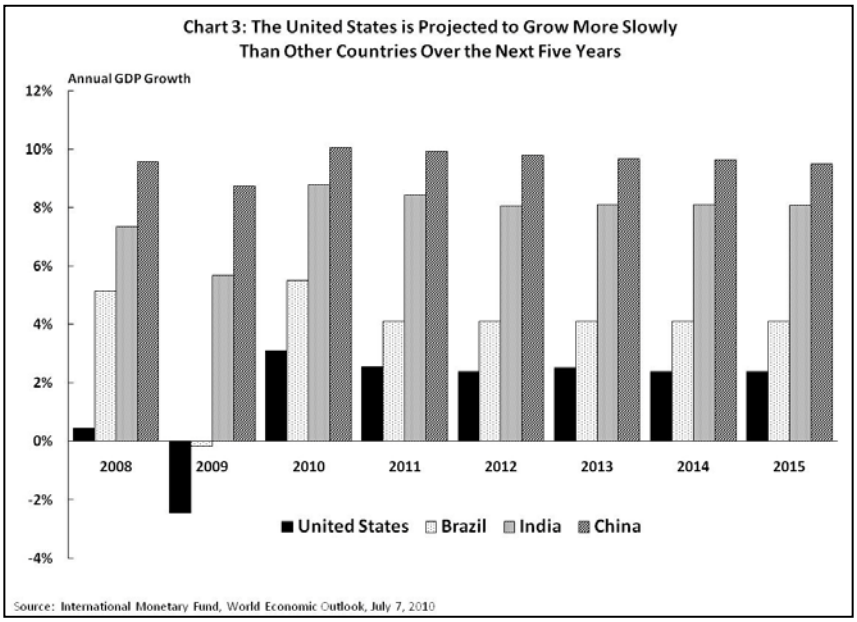


1978 to only 9.6 percent today (see Chart 1), yet the United States remains the world's largest manufacturer in terms of the value of goods produced.[2]

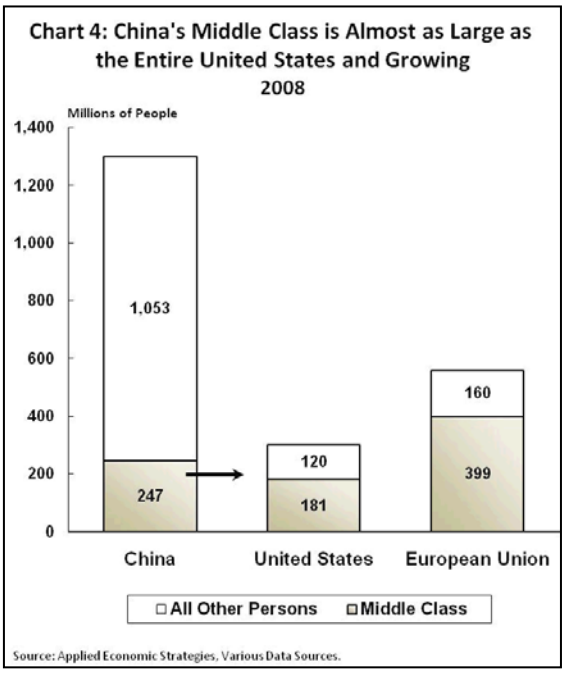
The same trends are found in agriculture. While 70 percent of all Americans worked in agriculture in 1840, only 1.6 percent do today, but the United States is the world's largest producer of corn, soybeans, and beef, and is the third largest producer of wheat.[3] Technology is the key force driving these trends, and more output is being produced in the U.S. with far fewer workers (see Chart 2). We believe that few fully understand the implications of the massive introduction of technology into the workplace that has occurred during the past 25 years.



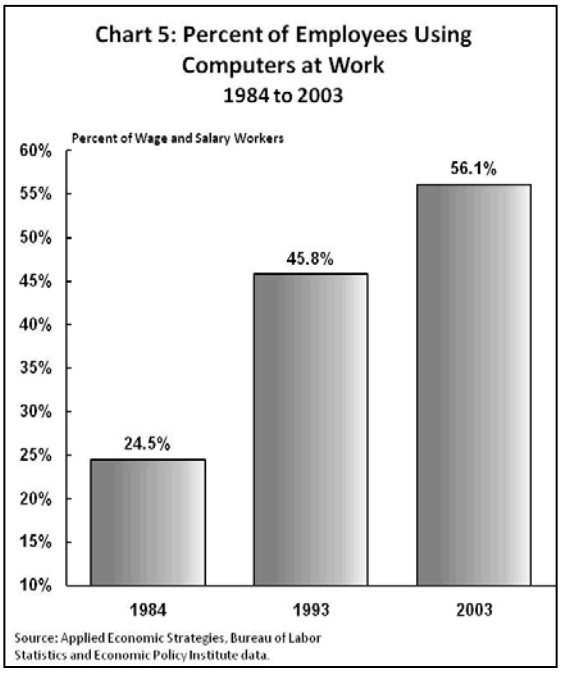
Equally important, few seem to have an understanding of how to expand employment opportunities in the private sector in this challenging new environment. To illustrate this point, the United States following World War II was the greatest economic power on the globe with vast markets, considerable investment resources, and an educated, skilled workforce with strong purchasing power. A half century later, the U.S. is still the world's dominant economy, but other countries are either now becoming or have become major economic powers in their own right, with growth opportunities that, in some cases, far exceed projected growth for the U.S. (see Chart 3).



We speak of China's small middle class, for example, yet the population of its middle class is nearly as large as the entire population of the United States, and it is growing larger each day—as is its voracious appetite for consumer goods (see Chart 4). As a result, financial resources are being deployed to take advantage of these significant new economic opportunities wherever they emerge globally. The result is that economic and employment growth are occurring more rapidly outside the United States than within. In addition, many emerging countries tend to place a significantly higher priority than does the United States on creating environments that attract investment and resources in order to create employment opportunities.



These economic trends pose special challenges for students and graduates seeking to enter the workforce and employers seeking the employees who will operate the 21st century workplace. While predicting the future is always problematic, it does appear that technology will rule at least the first decades of the 21st century, and nations without the ability to innovate and capitalize on the use of technology will be at severe risk. We forget that it has only been within the last 20 years that most jobs have come to incorporate some type of digital device in nearly every work process and technology has rapidly replaced many routine tasks (see Chart 5). This means that the demand



If the United States is not encouraging, promoting, and supporting innovation, then venture capital, talent, and job opportunities will flow to where it is being promoted.

for those with the skills necessary to participate in the digital workplace will only increase in the coming decade. It also means that the number of low-skilled, routine jobs will shrink as they are replaced by technology, particularly in the United States, with its high labor costs.

We wish to emphasize that companies create employment, but companies need innovation to thrive. Successful companies are focused on how to create an environment to seed innovation, how to nurture innovation, and how to hire the skills necessary to support innovation and the business opportunities it generates. Venture capital and top talent flow toward innovation, and it is the combination of the two that creates employment opportunities. If the United States is not encouraging, promoting, and supporting innovation, then venture capital, talent, and job opportunities will flow to the areas that are encouraging such innovation.

In meeting these 21st century challenges, HR Policy Association members believe that:

- As economies become more global and technology more pervasive, the ability to compete will depend heavily on whether companies have knowledge-based workforces committed to continual learning and skills development characterized by the ability to adapt quickly to emerging markets, new technologies, and constantly changing business environments.
- Our society may not yet fully understand the implications of the massive introduction of technology into the workforce and the remarkable increase in productivity during the past twenty-five years, or how to expand employment opportunities in the private sector when so much can now be done with so few.
- Emerging countries with high rates of growth tend to place a significantly higher priority than the United States does on creating environments conducive to attracting investment and targeting educational resources to create employment opportunities.
- American teachers are struggling to train students entering K-12 schools, a growing number of whom are coming from increasingly challenging socioeconomic backgrounds.
- The educational system in the United States seems to be having great difficulty producing graduates with the requisite skills to staff the jobs of the 21st century.
- Neither education policy nor educational institutions in the U.S. acknowledge the constant acceleration of change in how work is done and the skills needed to do that work.

- Many employers are having to spend far too much time training recent graduates at all levels—high school, college, and even graduate school—in basic literacy and communication skills which they should have learned by graduation.
- The development of individuals with science, technology, engineering, and math skills (STEM skills) has been badly neglected in the United States, creating national security issues and hobbling the economy. The U.S. needs to produce a far greater number of graduates with STEM skills in order to maintain our standard of living and meet our national security needs.
- Not all good paying jobs require a four-year college degree; even during this period of high unemployment, many employers are having difficulty filling well-paid trades positions. The American educational system no longer provides the kinds of vocational education courses that it once did, nor does society attach as much importance to the trades as it once did.
- In order to promote employment opportunities in the United States, academic institutions need to align educational curricula with the needs of employers.
- The workforce development resources of the federal government need to be far more in tune with contemporary workforce needs if they are going to have a positive impact on employment opportunities and employment security in the United States.

The challenge for American policymakers is to ensure that the educational systems in the United States are both supporting the special characteristics of American workers and recognizing the incredibly rapid changes that have occurred over the past twenty-five years in the way work is done and the competencies needed to do that work.

As we lay out our concerns and recommendations, we wish to point out that Association member companies operating globally have a special appreciation for the unique characteristics of the U.S. workforce. They find Americans more innovative. They see educational systems in countries outside the U.S. placing too much reliance on rote learning. They find that other countries are not encouraging students to think creatively or engage in integrative thinking. Further, American society is not as hierarchical as are other societies, which means that Americans are more willing to challenge conventional thinking and approach problems in non-traditional ways. Americans are much more open to new ideas and coming up with innovative solutions. Americans often excel at middle management in comparison with their counterparts in other countries, where their cultures make it more difficult to accept the concept of middle management.

In view of this, the challenge for American policymakers is to ensure that the educational systems in the United States are both supporting the special characteristics of American workers and recognizing the incredibly rapid changes that have occurred over the past 25 years in the

Seventy-two percent of employers rate new entrants with a high school diploma as deficient in writing; 54 percent of employers report high school graduate entrants deficient in math; and 81 percent of employer respondents report high school graduates as deficient in written communication skills.

way work is done and the competencies needed to do that work. For America to maintain its competitive edge over other countries that are growing more rapidly, the educational systems in the United States must do a better job of preparing our citizens for the world of work (see Chart 3).

This position paper provides in more detail the views of the chief human resource officer community regarding the challenges facing the United States with respect to workforce development.

III. Employers and the Educational System

The Association's members recognize that educators today are working tirelessly to prepare workers to fill today's jobs, and they deeply appreciate recent efforts to establish common educational standards for math, English, the arts, and other facets of basic education. However, employers believe that much remains to be done to bridge the divide between the employer community and the education community. Employers understand that when we come together to discuss education policy with educators, it may appear as if outsiders are telling educators what to do rather than trying to collaborate with them. We have full confidence that most educators are passionately committed to their students and developing solutions for the education system. What we as an Association would like to do is provide as much specificity as possible on the *objectives* that the employer community is seeking, and then work with the education community to help it teach towards those objectives.

Employers also understand that since the 1960s, the socioeconomic background of children entering school has changed dramatically and that this has significantly increased the challenges placed on our teachers and their ability to successfully teach. In 1970, about 11 percent of children lived in single-parent families; by 2008, the number had increased to 32 percent.[4] Social scientists have found that children growing up in single-parent families are:

- four times as likely to need help for emotional and behavioral problems;
- more likely to participate in violent crime; and
- twice as likely to drop out of school.[5]

Further, in survey after survey, lack of discipline is the number one complaint voiced by teachers, and the parents of students who disrupt classes often fail to support the school. Significantly, in one survey, almost 68 percent of all teachers said removing students with severe

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behavioral problems from the classroom would be most helpful in improving teacher effectiveness.[6] Other longstanding challenges have also increased, including a lack of student facility in English and the mixture of student learning abilities in the classroom. Nearly twice as many teachers today, as compared to 1992, say that a lack of facility in English hinders learning for at least one fourth of their students (22 percent *vs.* 11 percent), and more teachers (43 percent) agree that their classes have become so mixed in terms of students' learning abilities that they cannot teach effectively.[7]

By the same token, we hope that educators and government education institutions understand the frustrations of employers. One recent survey found that more than 42 percent of employer respondents rate new workforce entrants with a high school diploma as deficient in their overall preparation for entry-level jobs.[8] Seventy-two percent of employers rate new entrants with a high school diploma as deficient in writing; 54 percent of employers report high school graduate entrants deficient in math; and 81 percent of employer respondents report high school graduates as deficient in written communication skills.[9]

Global employers have firsthand knowledge of the educational systems in a variety of countries and the effectiveness of these systems in producing graduates with the requisite skills for their companies. They see countries such as Singapore and China doing an excellent job motivating citizens to move in conjunction with their educational systems to support emerging economic opportunities. These countries operate sophisticated technical schools and universities that track students in ways that closely align the business community with academic institutions, such that graduates are easily placed in growing industries.

IV. Need for Basic Workforce Competencies

While America's educational deficiencies in the STEM subjects are well publicized, one reality that often receives little notice is that more needs to be done to ensure that graduates have basic literacy and numeracy skills. This does not just apply to high school graduates. A common concern among chief human resource officers is the lack of basic workforce competencies among those entering the workforce at all levels, including those with master's degrees. Companies would prefer using corporate training resources to build *specialized* skill sets; however, many are currently being forced to sponsor remedial programs that either fix something that was broken in the new employee's

education process or provide something that was not but should have been available in his or her schooling.

For example, many employers are forced to send their new hires to orientation classes just to learn communications basics so that they can express themselves clearly in emails and other forms of written and oral communication.

Which Competencies Do College Graduates Lack?	
Competency	**Percent of Employers Who Say Competency Is Lacking**
Communication	49.7%
Flexibility & adaptability	37.0%
Tactfulness	35.8%
Initiative	28.9%
Teamwork	27.2%
Organizational	22.5%
Strong work ethic	20.8%
Self-confidence	17.3%
Problem-solving	15.6%
Detail-oriented	14.5%
Source: National Association of Colleges and Employers	

We live in an age of rapid communications, where younger people often communicate with truncated text messages. In the workplace, however, the ability to write clear sentences that lay out complete thoughts, ideas, and requests so that anyone reading the message can understand and successfully act on the communication is an absolutely essential competency. Otherwise, the recipient of the information may not respond appropriately. While younger people have little trouble interacting with email, instant messaging, social networking, and other electronic tools, they often fall short when communicating professionally via these outlets. Furthermore, employers have found that, in many cases, while the younger generation has a strong intuitive grasp on today's technology, their expertise is predominantly consumerist in nature. They have yet to fully demonstrate the ability to leverage technology and build on it in new and creative ways to enhance their

own workplace productivity. Vast amounts of information can be quickly assembled using the Internet, but too often analysis and creative application of that information does not follow.

Beyond communication and numeracy skills, employers seek employees who have the ability to think critically, who possess strong analytical skills, and who approach life with a sense of imagination. This has become particularly significant in the field of manufacturing, where production workers have traded heavy tools and manual labor for computer work stations and hand-held digital devices. Outside manufacturing, because of the difficulty companies are having finding those with the competencies they need, we see situations in which, for example, financial institutions are hiring physicists and electrical engineers and then training them for analytical positions.

The new normal requires being able to shift quickly, and first-time hires must come into the workplace with a willingness to embrace ambiguity and rapid change.

Further, employers often find students entering the workforce have little understanding about the basics of the culture within the workplace. The transition from school to the world of work is often a long, painful process for new employees, and even more so today where the four-year tradition of college education has stretched into five or six years. Many employers are reluctant to hire recent college graduates because so many fail at their first, second, and even third jobs.

For example, new entrants do not seem to understand the need for regular work hours, where they fit into the order of the workplace, and what it means to be an employee. They often resist learning workplace systems because they believe their way is the better way. We realize that this transition is part of life's journey, but employers are searching for a better way to ensure that the ambition, fresh thinking, and creativity of youth is woven together cohesively into the fabric of the workplace.

Finally, the ability for high school and college graduates in the United States to think conceptually, logically, and critically is very important in light of the trends in where work is sourced. Increasingly, routine, repetitive tasks are being done by technology or in low-wage areas outside the United States. Therefore, the ability and willingness to learn and be agile, as well as to accept working outside of one's comfort zone, are qualities that must be nurtured as the nature of work changes in the U.S. Overall, employers have found that the latest generation of college graduates lacks flexibility and has difficulty dealing with ambiguity and rapid change in the workplace. The new normal requires being able to shift quickly, and first-time hires must come into the workplace with a willingness to embrace ambiguity and rapid change. This ethic cannot be taught exclusively in the classroom, but requires work and life experiences, including exposure to the work environment.

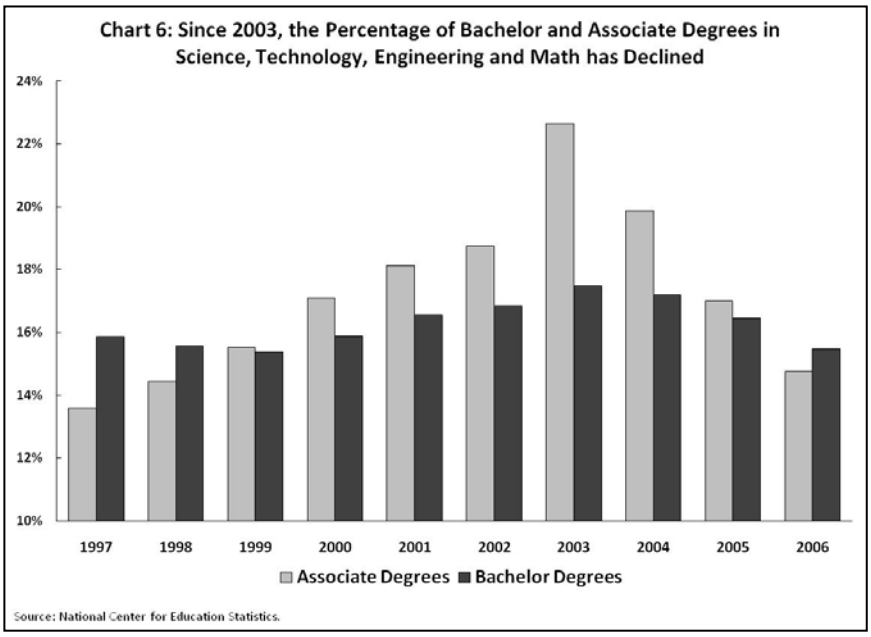
V. Shortage of Persons with Science, Technology, Engineering, and Math Skills

As the current crop of STEM workers approaches retirement age, employers are concerned that the next generation will be unable to step in and fill the massive vacancies in STEM-related positions in the American workplace.

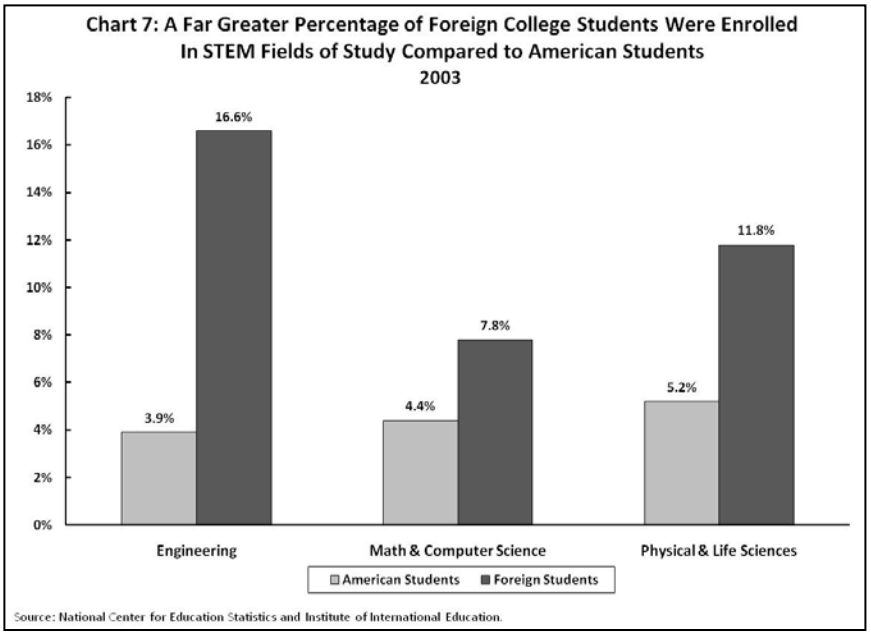
The development of individuals with science, technology, engineering, and math skills (STEM skills) has been badly neglected in the United States, creating national security issues and hobbling the economy. Nearly all HR Policy members report that companies are having difficulty finding and attracting persons with adequate STEM skills for jobs in the United States. They feel that development of STEM skills is badly neglected in the U.S. by both the educational system and society as a whole, and that the government, academia, and society generally should do far more to promote and develop these critically important skill sets. These companies see the lack of investment in these programs as hobbling the ability of the American economy to grow for a long time to come.

Furthermore, as the current crop of STEM workers from the baby boomer generation approaches retirement age, employers are concerned that, given the STEM deficiency in those entering American workforce, the next generation will be unable to step in and fill the massive vacancies in STEM-related positions that will be opening in the American workplace. Defense contractors, for example, anticipate tens of thousands of highly skilled engineers will retire during the next five years; most new entrants will need to be U.S. citizens who can pass government security requirements. There is, however, nowhere near the number of students needed in the pipeline to fill these jobs.

The reality is that in American universities, there are far too few American students enrolled in the STEM fields of study. In 2003, just 13.5 percent of American college students were enrolled in science, technology, engineering, or mathematical fields compared to 24.3 percent who were enrolled in education, the social sciences, and humanities.[10] In 2006, just 15.7 percent of bachelor degrees were awarded for the sciences, engineering, and computer and information sciences, compared to 27.6 percent for education, consumer services, and communications.[11] Moreover, the number of STEM-related bachelor's degrees, as a percentage of all four-year degrees, has been declining since 2003 (see Chart 6).[12]



Additionally, a far higher percentage of foreign students in U.S. colleges were enrolled in STEM fields of study compared to American students. In 2003, just 3.9 percent of American students were enrolled in engineering compared to 16.6 percent of foreign students (see Chart 7).



Most employers believe that tracking students is necessary to develop those with adequate STEM skills. There is a widespread feeling that if students interested in STEM subjects are not identified and tracked for STEM studies in middle school (grades 6 through 8), it will be difficult to stimulate their interest in the subject matter by high school

and even more difficult, if not impossible, to get them admitted to an engineering or technical university. Employers also believe that in efforts to track students gifted in STEM areas, society must be careful not to leave behind women and minorities, as they are often overlooked as prospective STEM workers at a young age. Further, the experience of large employers in Asia is that countries such as China, India, and Singapore aggressively track students and, as a result, are producing hundreds of thousands of engineers annually in their universities.

Recognizing the growing STEM skills gap between the U.S. and other leading economies around the world, many employers stateside are taking steps on their own to promote STEM education among America's youth. For example, a number of our member companies have teamed up with nonprofit organizations such as Project Lead the Way, FIRST Robotics, and the Business Coalition for Student Achievement. These organizations do such things as sponsoring STEM summer camps, after-school programs, extracurricular activities, and other STEM skills development programs for K-12 students in schools around the country. For college students interested in STEM fields, companies provide internships and temporary assignments where students can develop practical on-the-job work experience and problem-solving skills. In providing this support for the STEM subjects, these companies have found that it is important to foster the interest of STEM students in undergraduate programs throughout their time in college, as STEM students often enter school and get discouraged after a few semesters when they get into the meat of their studies. Overall, there is a growing frustration with the federal government's failure to coordinate with businesses in supporting these efforts.

Some cities in the United States are doing a good job developing specialized schools for STEM students and then attracting promising students to these schools. For many employers, however, these programs fall under the purview of local school boards, which design their programs and agendas. If the nation hopes to make a difference in producing students with STEM skills, the authority for these institutions should be placed in the hands of those who are more closely aligned and in tune with the career paths for STEM students.

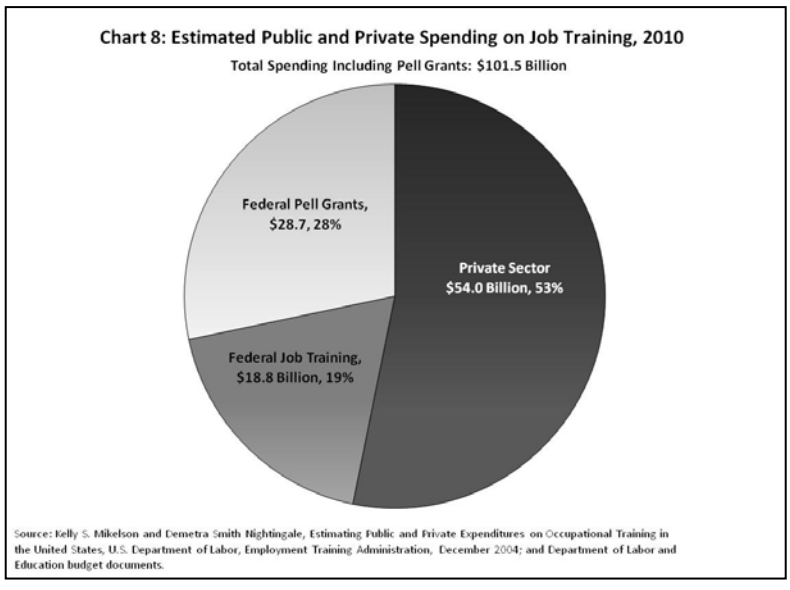
A final point: Many employers believe that a strong curriculum in STEM education fosters basic workplace competencies and could serve as a powerful tool in creating a new job-ready generation of American workers that is able to adapt nimbly to an ever changing economy.

VI. Need for Lifelong Learning and Willingness to Adapt to Change

As the change produced by the global economy continues to accelerate, lifelong learning has become an essential characteristic of the workplace. Career paths are constantly shifting as new technologies, new industries, and new work processes replace older ones at an increasingly rapid pace. In fact, because of the pace of today's economies, companies often change more quickly than the pace at which many of their employees can adapt to that change. People are typically hired and trained to do particular jobs, and they do not always adjust well when the job is no longer needed. Yet change is constant, and education will not end with a high school or college degree. The workplace of the future will require those in the labor force to return to educational institutions at various points in their careers to stay ahead of quickening waves of change.

VII. Private Sector Employers Deeply Committed to and Involved in Education and Training Programs

It would be nearly impossible to catalogue all the programs, resources, and initiatives that large employers are devoting to increase the skill levels of their employees, to help their employees adapt to the increasingly rapid cycle of change in the workplace, and to promote the education and training programs in their communities. Since the mid-



Currently, nearly all firms provide some training, and about 70 percent of employees receive some form of firm-sponsored training. On an annual basis, employers spend on average $1,000 per trainee.

1990s, employers have been spending at least $54 billion per year on job training, excluding administrative and overhead costs (see Chart 8).[13] Yet for some reason many people both inside and outside government believe that employers spend relatively little on training and must be strongly encouraged, if not mandated, to provide skills development programs.

Employer-provided spending slowly increased each year from 1986 to 2001, but has declined slightly since then for two reasons. Economic growth has faltered, but the wave of technology sweeping the economy is also impacting workplace training. Instead of people traveling to distant learning locations, incurring transportation and lodging costs, companies are relying more heavily on virtual learning environments by taking advantage of the web, video conferencing, and the like. Currently, nearly all firms provide some training, and about 70 percent of employees receive some form of company-sponsored training.[14] On an annual basis, employers spend on average $1,000 per trainee.[15] Here are a few examples of what our member companies are doing to support education and training programs within the American workforce:

In the manufacturing sector, one member company, which employs nearly 100,000 workers, has designed and implemented at least five programs in conjunction with community colleges, including:

- a student trainee program for high school and community college students to learn in a high-tech business environment;
- a 24-week technology training program to prepare students to become specialized technicians for the company;
- a two-year technician training program to equip students for entry-level positions;
- a two-year program on how to diagnose and repair broken equipment manufactured by the company;
- a machining skills development program for junior college students as well as for high school juniors and seniors; and
- a joint effort with at least eleven education and training groups to connect with K-12 students across America to inform them about careers in science, technology, engineering, and other in-demand professions.

- In the retail industry, this type of grass roots involvement in workforce education and training can be found as well. One of the Association's leading retail sector employers, with over 135,000 employees around the world, partners with community colleges to fill key positions within the company. For example, this year, the

company joined with a community college to host a two-week summer program that focused on career exploration and skills development for employment, professional performance, productivity, and retention in the workplace. This retailer has also developed a number of K-12 and other skill development programs to prepare students for life after high school, keep them engaged in their education, cultivate leadership ability, and prepare them for competition in school as well as the workplace.

- In the high-tech manufacturing and development sector, one member company, employing more than 200,000 workers, has undertaken significant measures in the education and skills development process. Included in the company's benefit package is an employee scholarship program that provides up to $15,000 per year per employee in the U.S. to pursue associate's, bachelor's, and master's degrees. Participants are given up to three hours of paid time off per week to study any field of their choice. Since 1996, this company has invested $900 million into this program, and more than 30,000 degrees have been earned. The company also works externally with community colleges and labor unions to integrate college classes with on-the-job training through state-approved apprenticeship programs. Furthermore, the company is coordinating with a number of K-12 programs to reach middle and high school students with information about the science, technology, education, and math fields and learning opportunities to encourage careers in STEM areas.

- Another high-tech industry employer of nearly half a million employees maintains partnerships for the co-development and delivery of content and curriculum to equip prospective employees with competencies needed to fulfill the specific needs of the business. For example, the company has partnered with:
  - a community college in Mesa, Arizona, to provide courses for software quality testing;
  - a community college in Omaha, Nebraska, to provide a course on "green" data center management;
  - a community college in Houston, Texas, to provide a project management training course;
  - a community college in northeast Iowa to provide a course in data center management skills; and
  - a community college in Columbia, Missouri to provide a course in data center management skills development.

- A leading global infrastructure, finance, and media company that employs approximately 300,000 workers around the world maintains numerous partnerships with community colleges to develop specialized training, certifications, apprenticeships, and associate degrees. The company provides funding directly to community colleges for the purchase of equipment as well as for the development of curricula.

- A member company in the restaurant industry employing more than 400,000 people has developed countless partnerships with community colleges around America to provide remedial language training for workers in preparation for jobs with the company.

- One global management consulting firm, which employs upwards of 180,000 workers, collaborates directly with community colleges to bring real-world knowledge and a deeper understanding of global trends to community college students to inspire them to develop a bigger, more informed vision for their futures. The firm also has designed, developed, and piloted a career advisory service for community college students, faculty, and administration. The baseline goal, as described by the company, is to increase the number of community college students who complete their two-year degrees and thereby have better job opportunities coming out of school.

- One global delivery services company that employs some 400,000 workers maintains partnerships with federal, state, and local entities in providing educational resources to current and prospective employees, including:

  - a driver training course in Landover, Maryland, sponsored by a Department of Labor grant, that has trained more than 1,000 drivers since 2007;

  - a driver training course in Franklin Park, Illinois, funded by the Illinois State Department of Commerce and Economic Opportunity, which will train an estimated 60 supervisors this year and has plans for eight Service Provider classes; and

  - extensive funding of new Urban League Entrepreneurship Center incubator programs in Philadelphia, Chicago, and Los Angeles to enable minority entrepreneurs to take advantage of new business opportunities and qualify for financing that will lead to high-level business growth through the provision of proper management skills.

Many employers believe that jobs that would have otherwise stayed in the United States have gone offshore because of the insufficient number of people with trades related competencies available in the U.S workforce.

In addition, tens of thousands of U.S. workers each year benefit from employee scholarship programs sponsored by their employers. Internal Revenue Code (IRC) 127 currently provides a tax exemption of $5,250 for workers receiving education assistance through their employers. Employers have found that the majority of workers take advantage of available educational programs right up to or below the $5,250 threshold, to benefit from the tax credit without negatively impacting their earnings. IRC 127 was made permanent through the Economic Growth and Tax Relief Reconciliation Act (EGTRRA) of 2001, otherwise known as the "Bush tax cuts." However, EGTRRA is due to sunset in its entirety on December 31st, 2010 and with it, any program not carved out through legislation, including IRC 127. Employers anticipate that the tax obligation will make educational resources provided by their companies cost prohibitive for employees in this difficult economy and prevent them from pursuing further education. Both employees and the entire U.S. economy would be well served by the extension of the IRC 127 tax credit beyond the current sunset date.

Beyond their own internal programs, our member companies also collaborate with a wide swath of nonprofit education, skills, and training groups around the country. Attached to this document is a sampling of such groups, along with links to more information about the partnerships they have formed with American businesses in training America's next generation workforce.

As the United States grapples with continuing high unemployment, policy makers should recognize that many employers believe that jobs that would have otherwise stayed in the United States have gone offshore because of the insufficient number of people with trades-related competencies available in the U.S workforce.

VIII. Not All Good Paying Jobs Require a College Degree

In the United States, one of the prevailing policy axioms is that everyone should have an undergraduate degree and that anyone who does not is, by and large, a failure. Such thinking, unfortunately, has done a tremendous disservice to those not inclined to pursue a college degree or who could not obtain one if they did.

In the United States, one of the prevailing policy axioms is that everyone should have an undergraduate degree. Its corollary is that anyone who does not enter or graduate from college is, by and large, a failure. Such thinking, unfortunately, has done a tremendous disservice to those not inclined to pursue a college degree or who could not obtain a degree if they did enter college. Even in the current period of high unemployment, jobs are going begging—many of them skilled trades and other so called blue-collar positions.

According to the Bureau of Labor Statistics, service occupation jobs are projected to account for over one-quarter of net job growth from 2008 to 2018, or 4.1 million jobs.[16] These jobs represent great first employment opportunities for entry-level workers. Currently, employers are having difficulty filling them due to the stigma associated with these types of positions. However, many employers see entry-level service and retail jobs as a prime opportunity for those without requisite workplace competencies to develop teamwork, communication, and customer orientation ability. And often, these businesses pull from their entry-level talent when developing leaders within the company.

Further, with the pending retirement of the baby-boom generation, millions of well-paid skilled trade and production employees will have to be replaced. Manufacturers, for example, are going to need to find an estimated 143,000 welders, 415,000 assemblers, and 434,000 metal and plastic workers to replace retiring employees.[17] Yet there seems to be a lack of recognition in the United States that these blue-collar jobs offer considerable job growth potential; that many of these jobs pay well; and that companies in good economic times and bad are having great difficulty filling trades positions (see Chart 9). In addition, utilities always need lineworkers; while this can be a physically demanding job, it often comes with excellent compensation packages. Yet linemen are in chronically short supply. Welders are also in constant demand, no matter what the economic climate. According to the Bureau of Labor Statistics, from 2008 to 2018 almost 2.0 million new construction employees will have to be found to replace all of workers that are expected to retire.[18] This includes 160,000 carpenters, 112,000 plumbers, and 168,000 electricians—relatively high-paying jobs for which there are fewer and fewer prospective employees with the adequate skill set.[19] All the new technology that runs the modern workplace needs to be built and maintained, and while these well-paying jobs do not require a college degree, they do require specialized vocational and technical training.

Unfortunately, our education and job training systems are not currently producing future employees in the numbers that will be needed to fill the demand for the blue-collar jobs of both today and tomorrow.

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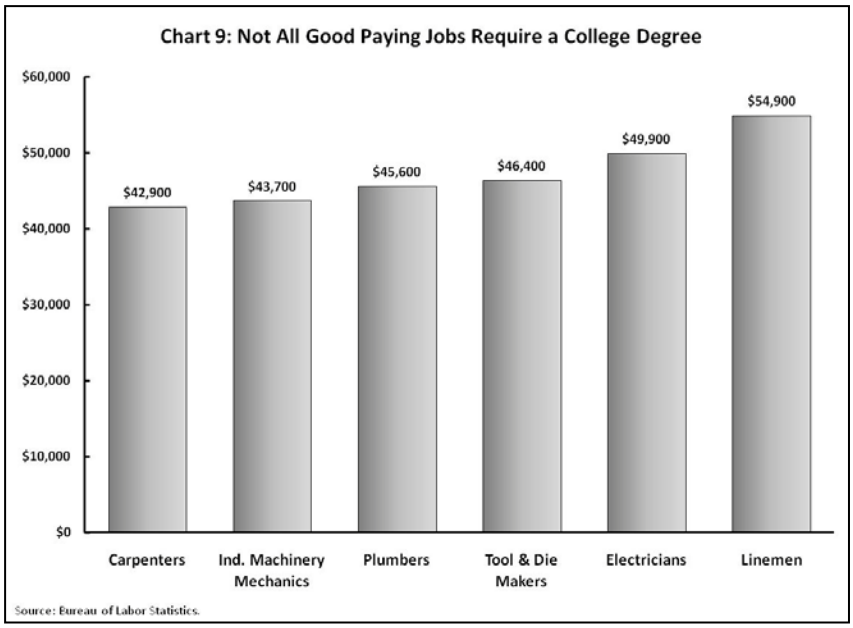
A recent lead story in *The New York Times*, entitled "Factory Jobs



Return, but Employers Find Skill Shortages," illustrates this trend.[20] The article reports on the mismatch "between the kinds of skilled workers needed and the ranks of the unemployed." The article describes a significant problem facing all companies—that "they are looking to hire people who can operate sophisticated computerized machinery, follow complex blueprints, and demonstrate higher math proficiency than was previously required of the typical assembly line worker."

IX. Apprenticeships a Valuable Training Tool

In recent years, the concept of apprenticeships has fallen out of favor in the United States, yet apprenticeships that marry education with life experiences are excellent training vehicles for trades positions. In the U.S., the secondary education system has dropped courses that formerly trained people for the trades. Yet beyond the borders of the United States, the apprenticeship concept is an integral part of the education systems of dozens of industrialized nations. Also, U.S. companies operating globally are often struck by the attitudes towards government training programs in the other countries as compared with those in the United States. Outside the U.S., those graduating from government training programs and achieving certifications from these programs are given far greater stature in the workplace by both existing and potential employers. In the United States, the opposite is the case. Many of the programs the government sponsors are considered remedial, teaching students what they should have learned in middle and high school.

In 2010, more than 60 percent of our member companies believed that federal, state, and local policy makers need to spend far more time ensuring that their training resources fit contemporary workforce needs.

X. Employer Concerns with Government Education and Training Programs

Employers also have frustrations with government education and training programs. A 2010 survey of the Association membership revealed that 54 percent of our member companies have chosen not to take advantage of government training programs; 45 percent use them only modestly; and only two percent make strong use of them. Only ten percent of Association members are satisfied with the government programs that they use. More than 60 percent believe that federal, state, and local policy makers need to spend far more time ensuring that their training resources fit contemporary workforce needs. Two-thirds believe that there is too much red tape and bureaucracy in these programs. And 65 percent of HR Policy members believe employers should be given a far greater voice in the design and administration of government training programs.

Overall, our company is very satisfied with government programs in the United States that help train people for positions that we need to fill within our company.

9%	Satisfied
26%	We use such programs, but we are not satisfied with them
65%	We don't use such programs

HR Policy Association Membership Survey February 2010

In seeking qualified applicants for and improving the skills of your workforce, does your company take advantage of government training programs?

3%	We make strong use of government education and training programs
43%	We use such programs, but only modestly
54%	We don't take advantage of such programs

HR Policy Association Membership Survey February 2010

HR Policy member companies are seldom, if ever, are visited by officials from the Labor, Education, or Commerce Departments asking them what the federal government can do with its resources to help their training needs grow employment opportunities.

To promote employment growth in the private sector, the Association believes that the federal government needs to take a far more integrated approach. The Commerce Department has economic development programs. The Labor Department has employment and training programs. The Education Department provides funding for education and vocational training programs. However, these programs are not being effectively coordinated to either assist individual employers in expanding employment opportunities in the United States or to promote national strategies to create competitive economic opportunities. Congress and the Administration should conduct a major review of government education, training, and economic development programs to determine how they could be made more effective and better coordinated. The various national security agencies are tied together by the Director of National Intelligence who reports to the President. We suggest that a comparable position be created in the federal government to tie together all federal resources to produce economic and employment opportunities.

Further, large employers operate in a multi-state business environment, yet federal training dollars and programs are disbursed on a state-by-state basis. This means that a large employer seeking to establish a national training program that may result in hiring and/or training dozens or hundreds of workers in 25 states must file paperwork in each of the 25 states and meet 25 different state requirements—a

burden that most private sector multi-state employers believe is simply not worth the effort.

It should also be noted that HR Policy member companies are routinely visited by compliance officers from the Wage Hour Division, OSHA, Office of Federal Contract Compliance Programs, and by investigators from the Equal Employment Opportunity Commission and the National Labor Relations Board, among others. They seldom, if ever, are visited by officials from the Labor, Education, or Commerce Departments asking them what the federal government can do with its resources to help their training needs grow employment opportunities. This stands in sharp contrast to the experience of global employers in other nations. These nations often identify particular industries and opportunities for national commitments, strategies, and goals for creating economic opportunity, and then work with educational institutions to graduate students into those fields. We understand the argument about the federal government not getting involved in picking winners and losers in the economic marketplace. However, that argument should not be used to justify the spending of federal resources in a random, uncoordinated fashion, training people for careers with limited to no long-term employment prospects, as is being done today to a large extent.

Federal, state and local policymakers need to spend far more time ensuring that the training resources being provided by the government fit contemporary workforce needs.

58% Agree
6% Disagree
36% No opinion

HR Policy Association Membership Survey February 2010

There is too much red tape, conditions, and bureaucracy in federal, state and local training programs for them to be of much value to our company.

58% Agree
4% Disagree
39% No opinion

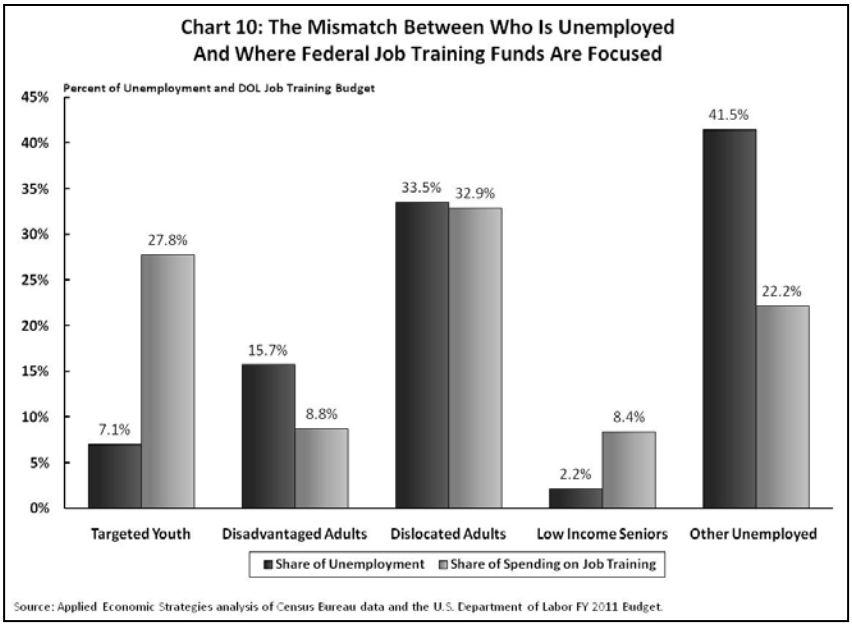
HR Policy Association Membership Survey February 2010

XI. Identifying Employment Opportunities and Targeting Government Resources

As policymakers grapple with high unemployment, consideration could be given to developing a national skills inventory database that would focus on identifying employment positions in short supply. This database could inform the public of existing and future job openings and inform training educators about where government dollars could be targeted to educate people for jobs in demand. Many Association members believe that the U.S., in contrast with other countries, does not have strong initiatives in place to identify which capabilities and competencies are essential in order for the nation to compete effectively on the world stage and to make the development of those skills a national priority.

XII. Targeting Training Dollars to Those Likely to Become or Remain Employed

The members of our Association understand the reason why government training programs tend to focus on the chronically unemployed to try to help them build their skills. However, many of these programs have little or no long-term impact on earnings or hours of work. Consideration should be given to focusing government training resources on those with an employment history who are willing to move and adapt to changing markets and changing skills requirements (see Chart 10).



In the economy of today and the future, career fields will come and go at a quicker pace, and a more effective use of government spending may be to shift resources towards supporting labor market transitions from diminishing careers paths into emerging ones.

There needs to be a fundamental restructuring of the way in which employers who hire are interacting with the academic community and government training and education policy makers such that all three communities become far better aligned in creating the conditions necessary to promote job growth and employment security.

XIII. Upgrading the Accreditation Process

For decades, national and regional accreditation bodies have served as the quality control gatekeepers for the higher education system in the United States. However, in recent years, employers have found that the caliber of graduates coming out of college and into the workplace has undergone a tangible decrease. Accreditation review and renewal currently operates on a five- to six-year cycle in most cases, and, given the rapidly changing methodology in the delivery of higher education today, has proven to be far too pedestrian in maintaining contemporary educational standards. Accreditation boards must accelerate the accreditation review and renewal cycle to keep up with today's rapidly changing educational models.

XIV. Conclusion

We hope that the reader will come away from reading this document understanding the concern among large employers that our governmental and academic institutions are being outpaced by the accelerating rate of change in the world economy. The types of products and services that consumers desire are constantly changing, as are the processes and technology used to provide them, and workers and their employers are scrambling to keep up. It is human nature to be comfortable with settled ways, but in the dynamic economy of the 21st century, there needs to be a fundamental restructuring of the way in which employers who hire interact with the academic community and government training and education policy makers, so that all three communities become far better aligned in creating the conditions necessary to promote job growth and employment security.

Major Business Groups Involved In Education and Training Reform

Achieve
Achieve is an independent, bipartisan, non-profit education reform organization based in Washington, D.C., that helps states raise academic standards and graduation requirements, improve assessments, and strengthen accountability.

Aerospace Industries Association Workforce Steering Committee
The Aerospace Industries Association Workforce Steering Committee actively examines ways that the aerospace industry can strategically address STEM education, including coordination of STEM efforts within the industry, as well as coordinating with other industries such as information technology and health.

American Association of Colleges and Universities
The American Association of Colleges and Universities is the leading national association concerned with the quality, vitality, and public standing of undergraduate liberal education.

American Council on Education
The American Council on Education is the only higher education organization that represents presidents and chancellors of all types of U.S. accredited, degree-granting institutions: community colleges and four-year institutions, private and public universities, and nonprofit and for-profit colleges.

Business Coalition for Student Achievement (BCSA)
The BCSA is a coalition of more than 70 businesses focused on K-12 Science, Technology, Engineering, and Math (STEM) education.

Business Higher Education Forum (BHEF)
BHEF is an organization of Fortune 500 CEOs, prominent college and university presidents, and foundation leaders working to advance innovative solutions to our nation's education challenges in order to enhance U.S. competitiveness.

Business Roundtable (BRT) Workforce and Education Initiative
The Business Roundtable Workforce and Education Initiative works to promote United States policies that support world-class education and lifelong learning systems for all Americans in an effort to ensure that the U.S. continues to welcome the world's best and brightest minds, and promote public and private investments that foster breakthrough research and development.

Center for Energy Workforce Development (CEWD)
The Center for Energy Workforce Development (CEWD) is a non-profit consortium of electric natural gas and nuclear utilities and their associations that was formed to help utilities work together to develop solutions to the coming workforce shortage in the utility industry.

Complete College America (CCA)
Complete College America was created in 2009 to significantly increase the number of Americans with a

college degree or credential of value and to close attainment gaps for traditionally underrepresented populations.

Council for Adult and Experiential Learning

The Council for Adult and Experiential Learning is a national, non-profit organization whose mission is to expand learning opportunities for adults by working to remove policy and organizational barriers to learning opportunities, identifying and disseminating effective practices, and delivering value-added services.

Council for Corporate & School Partnerships

The Council for Corporate & School Partnerships serves as a forum for the exchange of information, expertise and ideas to ensure that partnerships between businesses and schools achieve their full potential for meeting key educational objectives.

The Council of Chief State School Officers Association

The Council of Chief State School Officers is a nonpartisan, nationwide, nonprofit organization of public officials that provides leadership, advocacy, and technical assistance on major educational issues.

FIRST Robotics

The mission of FIRST Robotics is to inspire young people to be science and technology leaders, by engaging them in exciting mentor-based programs that build science, engineering, and technology skills, that inspire innovation, and that foster well-rounded life capabilities including self-confidence, communication, and leadership.

Institute for a Competitive Workforce (ICW)

The Institute for a Competitive Workforce is the education and workforce nonprofit, nonpartisan, 501(c)3 affiliate of the U.S. Chamber of Commerce that promotes the rigorous educational standards and effective job training systems needed to preserve the strength of America's greatest economic resource, its workforce.

Jobs for America's Graduates (JAG)

JAG is a national non-profit corporation that assists state affiliates in building statewide organizations to serve young people with barriers to success.

Junior Achievement (JA)

JA Worldwide is the world's largest organization dedicated to educating students about workforce readiness, entrepreneurship, and financial literacy through experiential, hands-on programs.

Learn More Now, Do More Now, Earn More Later Student Credentialing System (LDE)

LDE is a New Jersey-based student credentialing system created in response to employer surveys that cited knowledge deficiencies in young adults as a workforce challenge.

The Manufacturing Institute of the National Association of Manufacturers

The Manufacturing Institute is focused on delivering leading-edge solutions, information, and services to the nation's manufacturers through its National Center for the American Workforce and its National Center for Manufacturing Research and Innovation, which develop human capital strategies through

education reform and workforce development, and conduct applied research to provide critical information to public policy makers on challenges and opportunities for today's industry.

National Academy of Public Administration

The National Academy of Public Administration is a non-profit, independent coalition of top public management and organizational leaders that provides objective advice and practical solutions based on systematic research and expert analysis.

National Governor's Association Education, Early Childhood and Workforce Committee

Governor Bill Ritter (D-CO) is chair of the NGA's Education, Early Childhood and Workforce Committee and represents the Committee's viewpoint to Congress and the administration. This committee has jurisdiction over issues in the area of education (including early childhood, elementary and secondary education, and higher education) as well as in the areas of workforce development and labor.

Project Lead the Way (PLTW)

Project Lead The Way (PLTW) partners with middle schools and high schools to prepare students to be the most innovative and productive leaders in Science, Technology, Engineering, and Mathematics (STEM) and to make meaningful, pioneering contributions to their world.

SchoolMatters

SchoolMatters aims to arm the public with objective data and analysis to debunk the myths and counter the anecdotes that historically have driven education decision-making in the United States.

SkillsUSA

SkillsUSA is a partnership of students, teachers and industry working together to ensure America has a skilled work force. SkillsUSA helps each student excel.

Tapping America's Potential (TAP)

Tapping America's Potential (TAP) is an initiative with the goal of doubling the number of U.S. STEM graduates with bachelor's degrees by 2015.

Task Force on American Innovation

The Task Force on American Innovation is an alliance of America's most innovative companies, leading research universities, and many of the largest scientific societies in the United States, which supports investment in basic research in the physical sciences and engineering.

YouthBuild USA

YouthBuild USA was formed to guide the process of replicating and scaling up the YouthBuild program with quality in the United States after the program had succeeded in five neighborhoods in New York City.

Endnotes

[1] President Barack Obama, Remarks during the Urban League Centennial Conference, July 29, 2010.
[2] Manufacturers Alliance/MAPI and the Manufacturing Institute, *U.S. Manufacturing At A Crossroads: Choices Now Will Shape The Future*, 2009.
[3] Statistical Abstract of the United States, various years; and U.S. Department of Agriculture, Economic Research Service.
[4] Census Bureau, American Community Survey data.
[5] Children's Health Encyclopedia: Single-Parent Families; available at: http://www.answers.com/topic/single-parent-families.
[6] Andrew L. Yarrow, *State of Mind*, Education Week, October 21, 2009.
[7] Metropolitan Life Insurance Company, *MetLife Survey of the American Teacher: Past, Present, and Future,* 2009.
[8] Jill Casner-Lotto, *Are They Really Ready For Work?* The Conference Board, 2006.
[9] *Ibid.*
[10] U.S. Department of Education, National Center for Education Statistics.
[11] *Ibid.*
[12] *Ibid.*
[13] Kelly S. Mikelson and Demetra Smith Nightingale, Estimating Public and Private Expenditures on Occupational Training in the United States, U.S. Department of Labor, Employment Training Administration, December 2004.
[14] Bureau of Labor Statistics, "BLS Reports on the Amount of Formal and Informal Training Received by Employees," December 19, 1995.
[15] *Ibid.*
[16] Bureau of Labor Statistics, Employment Projections 2008-2018, December 10, 2009.
[17] Bureau of Labor Statistics, Employment Projections 2008-2018, unpublished data available upon request.
[18] *Ibid.*
[19] *Ibid.*
[20] Motoko Rich, "Factory Jobs Return, but Employers Find Skills Shortage," *New York Times*, July 3, 2010, accessed August 24, 2010, http://www.nytimes.com/2010/07/02/business/economy/02manufacturing.html.