

THE FUTURE OF JOBS AND CAREERS

BY EDWARD E. GORDON

Today's long-term jobs crisis is not about the current financial meltdown. It is about an accelerating talent showdown. The basic cause is that unprecedented technological advances are ever more rapidly transforming the world of work. The global economy will be more tech-driven with each passing year. This will continue to raise the U.S. talent ante for people seeking employment or for businesses that need to fill high-skill jobs. The U.S. Department of Labor finds that 62 percent of all U.S. jobs now require two-year or four-year degrees and higher, or special postsecondary occupation certificates or apprenticeships. By 2020 we can expect that these talent requirements will increase to include 75 percent of U.S. jobs.

The World Future Society predicts that over the next decade the amount of new technology introduced into the U.S. economy will equal that of the last 50 years! We are already witnessing a major talent shift from low-skill jobs to more complex knowledge jobs across major world economies as we enter what I term a "Cyber-Mental Age" of ultra-high technology.

The Global Talent Showdown

Globalization has dramatically increased worker and business mobility. Businesses are only just now beginning to understand the regrettable truth that the worldwide total of skilled workers will fall millions short in meeting either U.S. or international talent requirements. There are multiple related issues driving this global talent showdown. Most developed economies will soon experience a tsunami of retiring baby boomers, regardless of the economic crisis. U.S. boomers have on the whole developed high educational and technical skill levels which will need to be replaced.

The Cold War and space race rivalry with the former U.S.S.R. spurred special educational programs from the 1950s to the 1970s. Throughout America's history each succeeding generation has been better educated and better prepared for future careers than the last generation. But this has come to an end with Generations X and Y who are now replacing the boomers. What happened?

A significant technology paradox is now at work. While overall younger workers are "tech junkies," they lack the talent qualifications or even interest in careers centered on designing, making, repairing or applying and managing many 21st-century technologies. What many students and their parents consider "cool," "prestigious," or "sexy," jobs are based on an outdated 20th century career culture.

Too many students and younger workers lack the required higher reading, math, science and communications skills for growing 21st century careers. All this has been further magnified by a significant clash of generational work-life cultural expectations, values, ambitions and mindsets. The current recession has begun to alter these career perspectives. More finance, banking or marketing majors and MBAs have started reorienting their career goals toward jobs in science, technology, engineering and math (STEM). Many of these jobs are

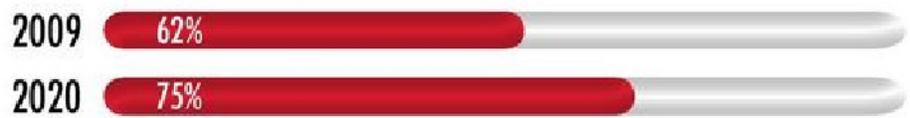
now unfilled. STEM jobs are predicted to outpace more traditional jobs in both numbers and salary levels over the next decade.

At the top of this STEM jobs pyramid are scientists and engineers who are inventing new technologies. However, installing, applying and maintaining these technologies across the entire spectrum of the U.S. economy requires an even broader base of what Peter Drucker called "knowledge technologists" with a wide range of education, training and

America's workforce comfortably meets this benchmark. Most businesses are now experiencing a rising tide of applicants who do not meet minimum job qualifications. Too many American workers are not equipped for today's rapid pace of change in which jobs come and go, and skills can rapidly become obsolete. This is not a new problem.

Over the past several decades the United States has muddled through these talent shortages by importing large numbers of high-skill workers or graduate

Percentage of jobs that require a two-year or four-year degree and higher, or special postsecondary occupation certificates or apprenticeships:



skills. From health care and throughout the professions, commerce and industry, demand is increasing for a knowledge-based workforce.

"There is a huge implementation phase to the adoption and use of these kinds of technologies locally," said John Irons, an economist and research director at the Economic Policy Institute in Washington, D.C. "The jobs involved do tend to span the spectrum of skills and income levels. And they are not going to be outsourced offshore."

Between 2010 and 2020 it is estimated that the United States will lack the qualified talent to fill anywhere from 12 to 24 million essential jobs throughout our economy. These same talent shortages are beginning to appear around the world. Soon 75 percent of all U.S. jobs will demand far higher entry-level qualifications, *i.e.*, a good liberal arts education plus postsecondary career-specific technical skills. Today only about 25 percent of

students. American businesses have used outsourcing, not just of low-wage jobs, but also millions of high-skill, high-wage jobs which they have placed in countries with wages either equivalent or higher than the United States, including: Germany, Japan, Singapore, Korea and Canada. But these business talent safety valves are about to fail.

Many nations are beginning to experience severe yearly population declines. This population shrinkage includes a significant decline in the size of their workforces. And the go-to sources of talent that countries could once easily rely on, such as India and China, are having challenges of their own. Both India and China graduate about 400,000 engineers each year. Yet according to several McKinsey & Company studies and other sources, only about 25 percent of Indian graduates are considered qualified for employment in international businesses. Worse yet, only 10 percent of Chinese graduates

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meet world-class multinational expectations. As India's and China's economies have become more sophisticated, they are moving from low-skill to high-skill products and service. To meet these demands, both countries have begun to call home millions of expatriates—engineers, scientists, medical personnel, and others—to fill the large talent gaps growing across their economies.

As a result, U.S. businesses will fail to import nearly enough high-skill talent. Nor will they be able to export enough high-skill jobs overseas. How will America keep pace with both new job growth and finding the massive amount of talent needed to replace departing boomer workers? The bottom-line answer: the U.S. labor market must begin equipping more Americans with the education and skills to fill these jobs.

A deep and wide workforce chasm now threatens the future U.S. and global economy. This is America's long-term talent showdown. The current recession will more quickly eliminate low-skill jobs from the U.S. economy. Current economic flashpoints, including the credit bubble, housing price declines, and toxic financial instruments, may for a time mask these talent shortage issues. But over the next decade they will not be able to reverse the major socioeconomic forces behind the global talent showdown.

The United States needs an immediate

major overhaul of its talent creation and distribution systems. Recruiting, retaining and developing skilled talent will become our top economic challenge. If not addressed, Manpower, Inc. predicts that 10 to 20 percent of U.S. businesses will be forced to close. However, businesses can begin to forge partnerships with others in their communities to rebuild the broken talent pipeline. They can turn the potential for a talent black hole into a decade of opportunity.

Developing Community Partnerships

Businesses and communities are beginning to face the realities of the new Cyber-Mental Age—that this is not grandpa's economy or workforce anymore. They are building "Gateways-to-the Future" through local community-based organizations (CBOs) or non-governmental organizations (NGOs). In the United States from California to North Carolina, these nonprofit CBOs and NGOs are raising the quality and diversity of education from elementary schools to postsecondary institutions. Their goal is that more students and current workers will receive the training and education needed to keep their communities vital participants in the global economy.

Over the past 10 years community leaders in business, education, unions, parent groups, economic and workforce

development, foundations and others have joined together in promoting a growing sense of renewal and hope in America's values of democratic self-governance and active leadership. They are mobilizing their communities to rebuild a broken education-to-employment system. And they are getting results.

In Santa Ana, California, nearly three-quarters of the population speak Spanish. It also has the second largest concentration of small manufacturers in the nation, including high-tech companies such as Power Wave Technologies and Textron Aerospace Fasteners. By the late 1990s the companies were having problems filling jobs. As a result some moved away and 20,000 jobs were lost then. A task force of business and education leaders was convened in 1998 by the Santa Ana Chamber of Commerce to address the issue. From this task force three conclusions were reached: Santa Ana had a widening talent gap between student/adult education and industry skill standards; a talent solution was needed that addressed the ever-changing needs of the business community; and the initiative had to be business-led. This led to the creation of "Bridge to Careers," a successful CBO model that over the next six years worked on initiatives to develop an array of job readiness programs supported by hundreds of local businesses.

In 2007 Santa Ana established High

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School Inc., a liberal arts college prep career academy where students take a broad range of core courses such as English, math, science and history, along with career and technical education through the six career academies located inside the high school. The academies offer courses based on the region's high-growth industries: engineering and construction, health care, automotive and transportation, global businesses, high-tech manufacturing, and new media. The school—jointly run by a board of local businesspeople and educators—also provides workers at small businesses with education and skill training programs. The chamber also began a program to raise the English literacy skills of workers by offering classes at locations across the region. As a result of this comprehensive approach to talent development, the chamber has evolved into the Greater Santa Ana Business Alliance, a CBO focusing on economic and community development strategies.

Career Academies

The career academy model will help more students develop the core skills needed for postsecondary success, while exposing students to a diversity of careers in high-growth, high-paying areas. There are many examples of successes throughout the country. One example is the Biotechnology Academy and the Bioman-

ufacturing-Technology Academy, both part of the Minuteman Regional High School in Lexington, Massachusetts. The Biotechnology Academy's four-year program melds a liberal arts education with courses in bioethics and genetics, and offers honors courses in math, chemistry and physics; students also gain extensive lab experience. Sixty percent of students at Minuteman High go on to postsecondary education; comparatively, almost all who attend the academy go on to college. The sister program, the Biomanufacturing-Technology Academy, prepares students for careers as lab technicians, quality control lab inspectors, manufacturing technicians, and other medical areas. Students in both academies can earn college credit at local postsecondary institutions, participate in internships and job shadow at local biotechnology companies. There are biotechnology academies elsewhere, including San Diego, Seattle, Silicon Valley and Baltimore.

The Austin Polytechnical Academy in Chicago, Illinois, is the only career academy in the city dedicated to careers in high-skill manufacturing. Thirty-five companies collaborate with the school and are providing internship opportunities. During extended class periods, until 4:30 p.m. each day, students are taught an integrated curriculum of core subjects and the Project Lead the Way curriculum. The academy is one of 100 new schools

that are part of the Chicago Renaissance 2010 initiative to reinvent public education through career academies, charter schools, and other experimental school models.

A Wake-up Call

Across America renewed civic engagement and best practice models, such as CBOs and career academies, are already helping communities expand their pool of qualified talent. We must create a new sense of urgency regarding the global talent showdown and its broad economic ramifications. It is time for a revitalization of talent creation systems that will lead to our economic growth and that of other nations around the world. **T**

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is the author of *Winning the Global Talent Showdown*. Learn about his research at www.imperialcorp.com, or contact him at imperialcorp@juno.com. *Winning the Global Talent Showdown* is September's Book of the Month. To buy the publication, please visit the ACTE bookstore at Shop ACTE, www.acteonline.org/shop.aspx.

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