

**DEVELOPING HUMAN CAPITAL:  
MEETING THE GROWING GLOBAL NEED FOR A  
SKILLED AND EDUCATED WORKFORCE**

**Business and Education Working Together Can Reduce Barriers to Employment and  
Create New Pathways to Career Development and Job Growth**

**Janet Bray**  
**Executive Director**  
**Association for Career and Technical Education (ACTE)**

**Ron Painter**  
**Chief Executive Officer**  
**National Association of Workforce Boards (NAWB)**

**Mitch Rosin, M.A., M.S., M.S.**  
**Director, Adult Education and Workforce Initiatives**  
**McGraw-Hill Education**

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## **Introduction: Business People from Mars? Educators from Venus?**

There has traditionally been a disconnect between the business people who create jobs and the education professionals who provide high school students and others with the knowledge and skills they need to be successful as employees.

For the most part, business professionals and educators live and operate in two very different worlds. They speak different languages (e.g., the Department of Labor speaks of “Industries” while the Department of Education talks about “Career Clusters”). They have different criteria for success and are held to different standards of accountability. Educators are graded on how well their students perform on tests, not on how well they perform later in life. Business people are evaluated on how innovative and successful they are in running their enterprises, including creating and marketing their products and services; expanding their markets; how well their workforce performs; and showing a profit.

Businesses have to satisfy their customers by showing results; they must continue to demonstrate the added value that comes from the use of their products or services. Public education reports to local, state and federal governments. Their direct “customers” (students, parents) have little to say in how schools are run and few options if they are not satisfied with the quality of education provided.

The one area where business and education overlap most is in the Career and Technical Education (CTE) sector. CTE students have more specific goals in mind for the education they are pursuing, which makes CTE providers more accountable to their “customers” in much the same way most private businesses are. This is decidedly true for post-secondary CTE students attending community colleges or trade schools, but it is also true for the majority of CTE students at the secondary level—they want to see value in exchange for the time and effort they are expending in focused study.

Therefore, it is not surprising that it is at the CTE juncture between business and education that the barriers are beginning to fall, and where the two camps are beginning to have a frank and critical discussion about the future of education and its relationship to business and employment in an increasingly high-tech and more competitive global economy. CTE is, in fact, leading the way in this regard for the rest of the education community.

One example of CTE participating in game-changing initiatives took place in Wisconsin last July when 40 education leaders from the state’s technical colleges, university system and K-12 school districts met with business, industry and labor leaders to discuss current priorities of both educators and employers, to identify how best to build a collaborative system that would benefit all the citizens of Wisconsin.

There was an immediate consensus at the conference that the accelerating pace of change from new and expanding technology would continue to elevate the ongoing challenge of preparing a skilled workforce for the future. Participants also agreed that it will require close cooperation and a real, ongoing partnership between the education and business communities to accomplish this goal.

Business leaders at the conference said educators needed to acknowledge there was a large and growing skills gap between the kind of highly trained employees 21<sup>st</sup> century businesses needed—employees with a global mindset and the ability to think critically—and the disappointingly low level of skills possessed by recent applicants coming into the job market.

Educators, for their part, said business had to play a more active role locally in supplying both resources and current information about specific training and education needs.

Both sides agreed a mechanism needed to be developed to institutionalize the new relationship between business and education. Fortunately, an infrastructure that could support such a mechanism already exists in the United States: the nationwide system of more than 500 Local Workforce Investment Boards (LWIBs) created by the federal Workforce Investment Act (WIA) of 1998.

LWIBs operate in every state and territory of the nation, where they direct federal, state and local funding to workforce development programs and oversee the 3,500-plus One-Stop Career Centers across the country. It is at the Career One-Stops that prospective employees can find skills training resources and local information on available jobs.

By law, more than 50 percent of each LWIB must be made up of employer representatives from the area's private business community. There are also seats set aside on the LWIBs for local union officials and representatives from nearby community colleges and other educational institutions.

The LWIBs are where business, labor and education are already coming together on a regular basis, and an excellent place to begin the kind of discussions that will be required to create a new, employment-focused education system for the U.S. Currently, some provisions of the WIA prevent the LWIBs from being as effective as they might be in coordinating with local CTE educational programs and institutions at both the secondary and post-secondary level. One could argue that this is the way it should be. But regardless of which side one takes on that issue, there is nothing wrong with LWIB business members and CTE professionals getting together—even informally—to begin a discussion of the many obstacles that continue to stymie greater cooperation between them.

Of the three authors collaborating on this policy paper, one comes from the world of workforce investment and has an appreciation for the training needs of prospective employers; one represents the interests of professionals from the field of career and technical education; and one straddles both worlds as an employee of a global education content provider serving the K-12, higher education and professional learning markets.

Our shared interests bring us together professionally, and we have begun an informal dialogue on our own about the disconnect between business and education, and about the many barriers that exist to forging a more seamless and comprehensive system of effective education and workforce development.

That ongoing dialogue has led to this paper. In it, we discuss the underlying trends shaping the current global job market; the impact of those trends on the education community; the obstacles that can prevent open dialogue and close cooperation; how important it is that the U.S. and other developed nations focus more resources on career and technical education; and what business and education can do to help each other move forward and begin working more closely together.

We do not have all the answers. In fact, the answers, as well as any actions or initiatives arising from those answers, will depend upon the local economic, education and other factors informing different regions. The annual PDK/Gallup poll on U.S. attitudes toward public schools clearly suggests that the states and local governments—by wide margins—are the places to decide funding, standards, content and measures of accountability.<sup>1</sup> Our goal is to discuss the broad goals and promising practices we see as the U.S. contends with global commerce and global efforts to develop talent in competitor countries.

The one thing we do all agree on is that the U.S. and other developed nations need to devote more resources to career and technical education—and not just for young people still in school—but even more critically for adults who face barriers to employment due to a lack of formal education, English language or other skills.

### **Different, but Interconnected**

Despite their many differences, the two worlds of business and education have been interdependent since the very early years of the 20<sup>th</sup> century. Employers rely upon educators to prepare students and adult learners with the skills and knowledge they need to function effectively in the workplace. U.S. educators understand that they profit from operating in a strong, healthy and thriving business environment. Steady economic growth and full employment means more tax revenue flowing into local and state coffers, benefitting K-12 public education. Rising incomes and a strong economy also means high school graduates have more options for continuing their post-secondary education, either in a traditional four-year college, a community college or a qualified technical school or apprenticeship program.

What has changed in the 21<sup>st</sup> century is not what the two groups want from each other so much as the rapidly evolving economic, social and technological environment in which we all find ourselves trying to keep up. A growing global economy, ever more connected by high-speed communications and information technologies, has changed the landscape and necessitated a corresponding change in the relationship between employers and employees, as well as between business and education.

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<sup>1</sup>[http://www.pdkintl.org/kappan/docs/2010\\_Poll\\_Report.pdf](http://www.pdkintl.org/kappan/docs/2010_Poll_Report.pdf).

Fundamental change has been coming since the end of the 20<sup>th</sup> century, but has accelerated greatly in the past 10 years. These changes—to both business and education—compel us to take a fresh look at our system of education—where we are putting our resources—and reevaluate whether or not we are putting them where they will do the most good and yield the best outcomes throughout society.

Employees change jobs and even careers much more often now than they did in the last century. Rare is the person today who remains with one company for his or her entire working life. Advances in technology and management processes occur so often and so quickly that continuous learning is an immutable fact of life for employees who want to stay marketable in a high-tech and rapidly changing global job market—and this is true for everyone, from the factory floor to the C-suite.

Manufacturing jobs are increasingly outsourced to countries with the lowest employment costs. Developing countries like India, China, South Korea and Brazil, following the lead of the U.S. and other developed nations, have learned that an educated workforce translates into global economic leverage. Even low-level white-collar occupations—such as back-office operations and customer service positions—can be sent to wherever hourly wages are low when compared with those usually paid in the U.S., Canada, the E.U. or other developed economies.

Creative jobs, such as copywriting, management consulting, editing and graphics work, can also be outsourced now to anywhere in the world where the work product is good and the price for it competitive.

Meanwhile, in the U.S., Canada and much of Europe, a high school-level education is no longer sufficient to guarantee a living wage. Even a bachelor's degree is no longer the ticket it once was to job security. In terms of getting a good job after graduation, a B.A. degree today is becoming comparable to a high school diploma of 20 years ago; new graduates with B.A. degrees are qualified for retail, consumer service or low-level office positions. Although recent college graduates with science degrees enjoy greater employability (and it is still possible to obtain an entry-level position in Sales with a B.A. that can lead to career success), a college diploma has lost much of its luster.

Recent data suggest, however, that technical credentials have the potential to outpace the wages of bachelor's degree holders as well as those with just a high school diploma. Twenty-seven percent of people with occupational licenses and certificates earn more than those with a B.A., and 31 percent of those with an associate's degree earn more. For example, individuals with a certificate in Engineering earn an average of \$46,500 a year, significantly more than what a B.A. graduate can earn in many fields.<sup>2</sup>

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<sup>2</sup>Georgetown University Center on Education and the Workforce. *Valuing Certificates: Defining the Value of Certificates*, March 20, 2009.

By 2016, many of today's low-skilled jobs will simply disappear. Compared with the situation in 2006, business will need 131,000 fewer stock clerks, 118,000 fewer cashiers and 114,000 fewer hand packers.<sup>3</sup> In other cases, the job titles have remained the same, but the skill sets needed to work in those jobs have changed. Auto repair jobs are a case in point. Many jobs lost in the manufacturing sector are either not coming back or are transforming into high-skill jobs demanding an increased knowledge and skill base.

Add to these long-term trends the severe global economic downturn of the past few years, and you have a world where education and portable skills training are no longer “nice to haves” but “have to haves.” Business needs educated, trained employees to survive in a global business climate that demands constant innovation and high performance. Prospective employees must have a good education and marketable skills to survive in a borderless economy dependent on technology. And education must become more accountable and better able to respond to the immediate needs of both groups than ever before.

Economists Claudia Goldin and Lawrence Katz have written that for most of the 20<sup>th</sup> century Americans prospered and inequality in the U.S. fell because—even though technology was advancing rapidly—the number of people who could understand the new technologies and keep pace with them was relatively large. People could learn how to repair cars, radios or TVs on their own through books, by tinkering or by taking “night school” trade courses.

This is no longer the case. Although operating and maintaining the latest technology does not require a four-year college degree, it can require college-level competencies in disciplines such as engineering, math, biological sciences and medicine.<sup>4</sup>

*The Atlantic* features editor Don Peck, in a September 2011 article excerpted from his book *Pinched: How the Great Recession Has Narrowed our Futures & What We Can Do About It*, references Goldin and Katz's conclusions and writes: “There would be no better tonic for the country's recent ills than a resumption of the rapid advance of skills and abilities throughout the population.”

### **How the 21<sup>st</sup> Century High-Tech, Global Economy, Combined with the Current Economic Downturn, is Redefining Education and the Job Market**

As we write this in November of 2011—more than two years after the official end of the great global recession of 2008–2009—unemployment in the U.S. continues to hover at levels not seen since the early 1980s—just over nine percent. Yet the demand for high-skilled, well-trained workers is strong and growing greater every year.

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<sup>3</sup>United States Bureau of Labor Statistics, *Employment Projections: 2006–16*, “Table 6. The 30 fastest-growing occupations.” December 4, 2007, September 3, 2009.

[http://www.bls.gov/news.release/archives/ecopro\\_12042007.pdf](http://www.bls.gov/news.release/archives/ecopro_12042007.pdf)

<sup>4</sup>Goldin, C. and Katz L.F. *The Race Between Education and Technology*, Harvard University Press, March, 2010. <http://www.hup.harvard.edu/catalog.php?isbn=9780674035300>

Caterpillar CEO Doug Oberhelman recently told a business audience in Calgary, Canada that Caterpillar cannot find enough “qualified hourly production people, and for that matter many technical, engineering service technicians...”

Even in the midst of the Great Recession, with soaring unemployment and limited job creation, 61 percent of U.S. employers surveyed said they found it difficult to find qualified workers to fill vacancies at their companies.<sup>5</sup>

How can that be? Why would well-paying manufacturing jobs go begging while U.S. unemployment remains at such record levels? The short answer is: Assembly line jobs aren’t what they used to be—they require the ability to solve problems and handle complex machinery. And there just aren’t enough people with the level of technical training necessary to be successful at the many skilled and semi-skilled jobs opening up today—the kind of jobs that can guarantee a worker with only a high school diploma or a year or two of college a decent salary with benefits.

As the need for better-educated and highly skilled workers increases, the available pool of such workers in the U.S. is decreasing. Nearly half the U.S. workforce today, approximately 52 million adults, has only a high school education or less—even among people 25 to 34 years of age, only about 30 percent are college graduates—while 25 million workers aged 18 to 64 lack even a high school diploma or GED credential.<sup>6</sup>

“[We] have to retrain every person we hire,” Caterpillar CEO Oberhelman said in Calgary, adding that the problem was not confined to the United States; the shortage of trained technicians around the world, he said, was “acute.”

“The education system,” he says, “has failed them.”<sup>7</sup>

That failure extends beyond a lack of technical skills. Many young job applicants today often lack the “people skills” required to deal effectively with customers and colleagues; to collaborate and work with others across cultural and national boundaries. These skills are critical during the hiring process, and can have a significant impact on the “employability” of a prospective hire. Research conducted in 2006 by Ohio State economist Bruce Weinberg and his Dutch colleagues Lex Borghans and Bas ter Weel found

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<sup>5</sup>The Springboard Project American Workforce Survey, July 2009.

[http://businessroundtable.org/uploads/studies-reports/downloads/20091008\\_American\\_Worker\\_Survey\\_Telebriefing\\_Presentation.pdf](http://businessroundtable.org/uploads/studies-reports/downloads/20091008_American_Worker_Survey_Telebriefing_Presentation.pdf)

<sup>6</sup>*Funding Career Pathways and Career Pathway Bridges: A Federal Policy Toolkit for States*, The Center for Postsecondary and Economic Success (CLASP), May 2010.

<sup>7</sup>“Caterpillar struggles to fill jobs, CEO says,” *Crain’s Chicago Business*, Sept. 13, 2011.

that “technological and organizational changes have increased the importance of people skills in the workplace,” particularly affecting “the labor-market outcomes of under represented groups.”<sup>8</sup>

Personality expert Dr. Robert Hogan and his leadership assessment authority colleague Dr. Kimberly Brinkmeyer subscribed to newspapers from each demographic region of the United States for six months, clipping and studying more than 6,000 major employment ads. Among their key findings: “Interpersonal skills were considered essential for 71% of the jobs involving client contact, 83% of the jobs involving subordinate interaction, 84% of the jobs requiring management interactions, and 78% of the jobs requiring co-worker interaction.”<sup>9</sup>

### **International Trends in CTE**

The issue of training more workers to fill the technology jobs of the future has also reached beyond the United States.

In India, where many leading firms have established in-house universities to teach recruits the rudiments of their business, the government has responded by asking industry to design one of the world’s most ambitious attempts to close the skills gap.

The Indian government has also provided capital funding to train 150 million workers by the year 2022. The National Skills Development Corporation (NSDC), which is charged with managing the program, recently completed an analysis of the 20 key industry sectors, identifying both the soft skills and technical skills gaps that exist within each industry. Dilip Chenoy, the chief executive of the NSDC, calls it “a demand-led supply-side model.”<sup>10</sup>

Many E.U. countries such as Germany and Austria are famous for their technical apprenticeship programs, but recent research suggests this type of training can backfire on workers later in their careers.

Researchers Eric A. Hanushek of Stanford, Ludger Woessmann of the University of Munich and Lei Zhang of Tsinghua University in Beijing analyzed microdata from 18 countries with apprenticeship programs and found that vocational and general education programs that focus too sharply on the school-to-work transition involve the following trade off: students may find gainful employment immediately after graduation, but are less adaptable, leading to diminishing opportunities for employment later in life as technologies change.<sup>11</sup>

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<sup>8</sup> *People People: Social Capital and the Labor-Market Outcomes of Underrepresented Groups*,” NBER Working Paper No. 11985, January 2006. <http://www.nber.org/papers/w11985>

<sup>9</sup> <http://www.hoganassessments.com/blog/robert-hogan-phd/workforce-2018-future-now>.

<sup>10</sup> *The Economist*, September 10, 2011.

<sup>11</sup> Hanushek, E.A., Woessmann, L. and Zhang, L. *General Education, Vocational Education, and Labor-Market Outcomes Over the Life-Cycle*, Working Paper 17504, National Bureau of Economic Research, October 2011.



In Europe, both EU 15 and Eastern Europe Central Asia (ECA) countries have established Active Labor Market Programs (ALMPs) that include, among other initiatives and programs, technical education to “improve the vocational qualifications of participants.”

An analysis of the impact of ALMPs in OECD countries conducted by Arvo Kuddo for The World Bank’s Human Development Network’s Special Protection Team suggest that “an increase in the intensity of spending on ALMP programs (defined as the percentage of GDP allocated to active policies divided by the unemployment rate) accounts for 10 to 20 percent of the total increase in the employment rate observed from 1997 to 2002.”

According to Kuddo, evidence on ECA “shows rather positive impacts of training for participants, with relatively proven cost-effectiveness, compared to OECD countries. **On-the-job training and employer involvement and sponsorship seem to be associated with more positive outcomes than classroom training and programs that do not have connections to the private sector.**” [Emphasis added]

The question that remains outstanding is why the United States has not done the same analysis, nor made capital investment in its own labor force.

Consider that:

- According to forecasts by the Bureau of Labor Statistics (BLS), 71 percent of the jobs expected to show growth to 2016 will require post-secondary credentials.<sup>12</sup>
- Employers today estimate that 39 percent of their current workforce and 26 percent of their new hires will have basic skills deficiencies.
- Sixty-five percent of all American employment now requires specific skills, and 75 percent of the American workforce will need to be retrained merely to retain current jobs.
- Forty-six million college-educated baby boomers will retire in the next twenty years.<sup>13</sup>

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<sup>12</sup>op.cit.

<sup>13</sup>Last three bulleted points according to information gathered by the National Association of Workforce Boards (NAWB).

<sup>13</sup>*Report of the National Commission on Adult Literacy, June, 2008* - Source: U.S. Census Bureau, 2006, American Community Survey (Public Use Microdata Samples); prepared by National Center for Higher Education Management Systems (NAHEMS). Unduplicated population = 88,003,964.

<sup>13</sup>Thirty million adult Americans score at “below basic” literacy level and another 63 million adults can only perform simple literacy tasks, according to the National Center on Education Statistics, National Assessment of Adult Literacy, (NAAL, 2003), U.S. Department of Education, 2005.

It is difficult to determine where these trained, educated workers are to come from to fill these jobs when:

- Approximately one million U.S. high school students a year currently drop out of school before obtaining a high school diploma—1.3 million in 2010, according to the Alliance for Excellent Education.
- Eighty-eight million U.S. adults have at least one major educational barrier to employment (lack a high school diploma, no college study, and/or do not speak English well),<sup>14</sup> and 93 million score at lower levels of national assessments of functional literacy skills.<sup>15</sup>
- Roughly half of the adult immigrants living currently in the U.S. report that they speak English “less than very well,” and an increasingly large proportion of the U.S. workforce in the near future will be made up of recent immigrants, with one in every four Americans of Asian or Hispanic origin by 2030.<sup>16</sup>
- About two-thirds (65 percent) of our projected 2020 workforce is already beyond the reach of our elementary and secondary schools; the number of people aged 18 to 44 with a high school diploma or less is equal to the number of people that will be graduating from high school between 2007 and 2024.<sup>17</sup>
- The U.S. will not be able to replace current workers from the pool of young people now entering or in school—a 2005 Southern Region Education Board report notes that as the population gets older and more baby boomers retire, the percentage of working-age adults with a high school education will actually decline by four percentage points by 2020.<sup>18</sup>

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<sup>14</sup>*Report of the National Commission on Adult Literacy, June, 2008* - Source: U.S. Census Bureau, 2006, American Community Survey (Public Use Microdata Samples); prepared by National Center for Higher Education Management Systems (NAHEMS). Unduplicated population = 88,003,964.

<sup>15</sup>Thirty million adult Americans score at “below basic” literacy level and another 63 million adults can only perform simple literacy tasks, according to the National Center on Education Statistics, National Assessment of Adult Literacy, (NAAL, 2003), U.S. Department of Education, 2005.

<sup>16</sup>National Commission on Adult Literacy, *Reach Higher, America: Overcoming Crisis in the U.S. Workforce*. New York: National Commission, pp. 2–10, 2008.

[www.nationalcommissiononadultliteracy.org](http://www.nationalcommissiononadultliteracy.org)

<sup>17</sup>The Working Poor Families Project: *Strengthening State Financial Aid Policies for Low-Income Working Adults*, by Price, D.V. and Roberts, B. (2007)

[http://www.workingpoorfamilies.org/pdfs/Policy\\_Brief-Financial\\_Aid\\_Fall2007.pdf](http://www.workingpoorfamilies.org/pdfs/Policy_Brief-Financial_Aid_Fall2007.pdf)

<sup>18</sup>Mingle J., Chaloux B. and Birkes A. “Investing Wisely in Adult Learning is Key to State Prosperity.” Southern Regional Education Board, Atlanta, p. 1, 2005

- The Georgetown University Center on Education and the Workforce predicts the U.S. will need three million more associate degrees or higher than current trends in graduation rates predict—a 10.6 percent increase in the number of students graduating each year through 2018 – just to meet the projected demand for educated workers.<sup>19</sup>
- According to a 2005 report, 63 percent of students at two-year colleges and 40 percent of those at four-year institutions nationally must take at least some remedial instruction simply to function at the college level. Despite remediation efforts, the number of students dropping out during their first year of college has risen to deplorable levels. Half of all community college students do not come back for their second year, while as many as 25 percent of freshmen at four-year institutions do not return after their freshman year.<sup>20</sup>

The current U.S. workforce comprises approximately 150 million workers. Public schools graduate approximately three million students annually. Thus, only two percent of the annual workforce can be supplied by public schools. By projecting that statistic out for 10 years, only 20 percent of the workforce in 2020 can come from public schools.<sup>21</sup>

In sum, to have a skilled workforce in the future, we must invest in the skills of adults already in the workforce.

### **It’s Not Just Poor People—These Trends Will Impact the Middle Class**

MIT economist David Autor, wrote in a 2010 policy paper that global economic forces and trends today “are rapidly shifting the quality of jobs, reshaping the earnings distribution, altering economic mobility and redefining gender roles” in developed nations. Recent jobs losses, he wrote, have been “far more severe in middle-skilled white- and blue-collar jobs than in either high-skill, white-collar jobs or in low-skill service occupations.”

“The result has been a labor market that greatly rewards workers with college and graduate degrees but is unfavorable to the less-educated, particularly less-educated males. The economic and social repercussions,” Autor predicts, “will pose long-term challenges for economic and social policy in the decades ahead.”<sup>22</sup>

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<sup>19</sup>Carnevale, A.P., Smith, N. and Stroh, J. *Help Wanted: Projections of Jobs and Education Requirements Through 2018*. <http://cew.georgetown.edu/jobs2018/>

<sup>20</sup>*The Governance Divide: A Report on a Four-State Study on Improving College Readiness and Success*, a report conducted and issued by the Institute for Education Leadership, the National Center for Public Policy and Higher Education, and the Stanford Institute for Higher Education Research, 2005.

<sup>21</sup>National Commission on Adult Literacy, *Reach Higher, America*, Executive Summary, p. 1

<sup>22</sup>Autor, D. “U.S. Labor Market Challenges over the Longer Term,” October 2010. Paper prepared for the Federal Reserve Board of Governors.

In his September 2011 *Atlantic* article mentioned earlier, editor and author Don Peck notes that only about 30 percent of Americans aged 25 to 34 are college graduates. “The true center of American society,” Peck writes, “has always been its nonprofessionals—high school graduates who didn’t go on to get a bachelor’s degree make up 58 percent of the adult population. And as manufacturing jobs and semi-skilled office positions disappear, much of this vast, nonprofessional middle class is drifting downward.”<sup>23</sup>

### **The Barriers to Greater Cooperation Between Business and CTE—Two Points of View—A Conversation**

*Co-Author Ron Painter is the Chief Executive Officer for the National Association of Workforce Boards, the leading workforce association representing the nation's more than 500 business-led Workforce Investment Boards (WIBs).*

*Co-Author Janet Bray is Executive Director of the Association for Career and Technical Education, the largest national education association dedicated to the advancement of education that prepares youth and adults for careers.*

*Painter and Bray recently sat down for a conversation, moderated by co-author Mitch Rosin, to articulate how they each see the issue from their respective sides—workforce investment and CTE. An edited excerpt from that conversation follows.*

*They agree that the goals are to make the education and workforce systems work more efficiently together, to coordinate both better with the business community, to train more people and put more people to work. But both also understand that there are barriers to communication that exist between the two worlds, often frustrating progress.*

**Ron Painter:** “From my side of the world, we need to understand more of the fundamentals of the CTE world. And they need to understand some of the fundamentals of our world.”

**Janet Bray:** “It’s true. The two sides do not fully understand each other.”

**Ron Painter:** “One thing I often do not understand is: what are the financial barriers and disincentives that prevent students from getting the kinds of skills and training they need. Because when Workforce Boards meet with state legislators, or meet with federal legislators, we often don’t understand why these skill gaps can’t be addressed.”

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<sup>23</sup>Peck, D. “Can the Middle Class Be Saved?” *The Atlantic*, September 2011.

<http://www.theatlantic.com/magazine/archive/2011/09/can-the-middle-class-be-saved/8600/>

**Janet Bray:** “Education doesn’t understand the workforce system. The employer community doesn’t really understand either education or the workforce system. The employers say ‘I have this skills gap, this need for employees with a particular skill—why aren’t you fulfilling that need?’

“The education community does make an effort to align with the employers, especially the CTE community, but education is held to state and federal accountability standards that have nothing to do with employer needs.

“And so there’s a major disconnect going on right there—the two sides have completely different accountability systems.”

**Ron Painter:** “Yes, and here’s another—in business we become frustrated with this whole notion of credit and non-credit courses. That’s inside baseball to us. We need workers with skills as determined by industry-recognized credentials. That’s what we want.”

**Janet Bray:** “We know what you want. I heard it all loud and clear at the conference in Wisconsin. The business people said ‘There are three things we need from the CTE educators: (1) employees who understand the needs and benefits of lifelong learning; (2) people with a cultural mindset, who understand other cultures and the need to work within a global society; and (3) workers who can think systematically—people with problem-solving and higher-order analytical skills. They have to be able to take their skills and align them with other areas, be able to look beyond just the narrow set of skills they have to a bigger picture.’”

**Ron Painter:** “What we can’t figure out—and maybe you can help us understand this—is that these kids spend two years in a high school CTE program, and when they come out, most don’t have the skills that enable them to enter the labor market or go on to postsecondary training. Also, we can’t understand why high school level CTE programs have to poll the students and ask them what they want to study. We don’t do that with academic subjects like math or English.”

**Janet Bray:** “You have to understand that what’s driving education right now are the accountability requirements of No Child Left Behind.

“In secondary, we have a focus on testing, because that is how they are being judged. And until that changes, there is going to be that narrow focus on testing. So if we’re going to make any change to the collaboration between the workforce system and the education system, it’s going to have to come from the accountability side.

“That’s not to say it can’t happen. There are pockets of it happening in the U.S. But at the wholesale level, it’s going to have to come from state and federal legislation.”

**Ron Painter:** “And, again referring to what we know of our attitudes toward public schools, of course, there are lots of people right now who don’t believe the federal government should play any significant role in education.”

**Janet Bray:** “That’s right—another potential obstacle.”

“Look, these aren’t black and white issues, but shades of gray. There are no easy answers. So a tech school or community college will say ‘we’re going to align with what they need in our area; they need more welders, more electricians.’ But what about those students who don’t want to study welding or electrical work, who want to study something different, such as construction, electronics or IT? You have to narrow down or give them choices.

“Another gray area is that if you are going to align with employer needs, you have to do it for the region you are in. Because the needs in Massachusetts are going to be totally different from the needs in Montana. You have to think about this as you’re making program decisions.

“And yet another frustration for us is that employers will say, ‘We don’t know what we’ll need down the road. We don’t know what our business will look like in the future.’

“So it’s easy to say we need you to line up for it, but education can’t react that quickly or close down a program that quickly. Sure education needs to respond more quickly, but there are still limitations to how fast they can react. “There are a lot of disconnects there, a lot of gray areas. We’ll never get rid of them all, but we should ask—‘How can we move the disconnects closer?’”

**Ron Painter:** “I think an area we should work more closely in is in employer engagement. I hear employers’ complaints that they are asked constantly to attend one meeting or another to discuss what ‘we’—workforce and education—need from businesses. They have a product to produce or a service to deliver and I think its not that they don’t want to get involved, it’s that they don’t have the time, particularly when we are talking about smaller business. A local WIB—working through industry sector panels and coupled with an active business voice and good data analytics—might be able to help address some of these issues with the advisory boards at the tech centers and community colleges. We could ask for a waiver to establish a separate advisory board and hold the LWIB accountable for the data the schools need. This dual role for LWIBs is being done in the economic development arena where the need for workforce analysis is essential to receiving federal funds, LWIBs are performing the analysis for economic development entities. This analytic ability could be applied to the tech school advisory boards in that we could allow LWIBs to serve as that technical resource on business needs. LWIBs are made up of at least 50 percent local business people and should know the businesses and employees and skill needs on the ground.”

**Janet Bray:** “The school advisory boards are required in many of the states. There are places where it’s being done right, and we can learn from them.

“At the Lehigh Tech Institute in Pennsylvania, for example, the Institute’s advisory board includes the head of the local WIB, the head of the teachers’ union and members of the local employer community.

“Together they decide what programs will be offered at the tech institute. So everything is aligned. Recently, they decided to put in a new program on nanotechnology, since that’s where things are heading in their area. So they put together a program advisory committee, and that committee is made up of educators and the employer community—the employers saying ‘this is what we need,’ and the educators are saying ‘here’s how you implement that into the curriculum.’”

**Ron Painter:** “That’s promising. The LWIB’s can also be a big help to CTE in making the case for its importance to policymakers, precisely because they aren’t in the education system. It makes a better case if the LWIBs are making it, as they are an objective third party.”

**Janet Bray:** “Yes. Career-building and technical education gets a huge boost if there’s a very active business voice arguing for it. That’s certainly one other place where we can work together.

“Eventually we have to have that hard conversation of ‘What do you do well, what do I do well, what do you expect of me, what do I expect of you?’”

**Ron Painter:** “Yes. Then they can get to the ‘what can we do together?’ part. That makes it very powerful, very leveraged.”

**Janet Bray:** “The important thing is for each of us to really understand what the other does. Then you can both respect and hold each other accountable. That’s how this should work.”

**Ron Painter:** “We have the same goals, just different channels, different accountability systems. How do we get them working together?”

**Janet Bray:** “Baby steps. We just keep talking. I honestly believe the workforce system could be a strong bridge between CTE and the business community.”

**Ron Painter:** “And I strongly believe that CTE can have a key role in building a region’s employee talent and skills base—in fact, I know it can.”

**Janet Bray:** “Well, that’s a place to start from.”

### **Possible Solutions and Suggested Steps**

Dialogue is essential for beginning to address these issues. Going beyond conversation, however, will require specific policies and initiatives, as well as action at the federal level.

Some proposals for remedying the disconnect between employer and education needs include:

**1. From the National Association of Workforce Boards (NAWB):**

- Continue the proactive leadership from the business community, exemplified by the LWIBs, critical for a truly demand-driven and industry-led, locally administered system.
- Implement effective program-level governance centered on demand-driven, business-led Workforce Investment Boards that hold maximum control over the allocation of resources. Ensure flexibility in determining the most appropriate composition for state and local Workforce Investment Boards (WIBs) to ensure these boards are composed of individuals best suited to address the needs of a particular state or economic region.
- Focus on outcomes that are reflective of and which can have an impact on the regional labor market, such as: entered employment rates in local industries that have been identified as critical; helping job-seekers earn credentials that are recognized by the business community; readiness for work (including post-secondary training that does not require remediation); participation rates for the labor force; and full or partial replacement of current WIA measures, including entered employment, wage at placement, retention and other common measures.
- Encourage more flexibility in determining One-Stop Career Center partners, based on the needs of a particular state or community, and flexibility in the sequencing of services for sending people for training.
- Encourage innovation, especially that which utilizes technological advances to provide a more versatile system that streamlines service delivery, modernizes data collection, validates investments, simplifies reporting efforts and identifies and implements new programs to meet changing needs of regional communities and economies.
- Spread the message to young people at all grade levels and to parents that skilled technical positions which do not require a bachelor's degree, but do require post-secondary training, provide a secure and meaningful future. These technical positions are just as essential to our economic future and should be just as high a priority with the public schools as college preparation.
- Ensure every worker has access to life-long learning opportunities at all ages and in numerous contexts, including at work and at home.
- Provide flexibility in the use of financial resources, including across funding streams to ensure that states are able to respond and adapt to the unique situations that are confronting them.



## 2. From the Association for Career and Technical Education (ACTE):

- Provide the right mix of skills for the labor market by providing young people with generic, transferable skills to support occupational mobility and lifelong learning and with occupationally specific skills that meet employers' immediate needs.
- Ensure all students in vocational programs have adequate numeracy and literacy skills to support lifelong learning and career development.
- Reform career guidance to ensure it delivers effective advice for all; specifically, by developing a coherent career guidance profession, independent from psychological counseling and well-informed by labor market information, as well as by building a comprehensive framework of guidance through partnership with employers.
- Ensure that CTE teachers and trainers are well prepared with industry experience by encouraging teachers in CTE programs to spend time working in their related industries and also by promoting flexible pathways of recruitment, which make it easier for those with industry skills to become part of the workforce of CTE institutions through effective preparation.
- Make full use of workplace learning and ensure workplace training is of good quality, both through an effective quality assurance system and a clear contractual framework for apprenticeships.
- Devise effective responses to the current economic downturn, to sustain workplace training, and cope with increased demand for full-time CTE.

## 3. From the Business Roundtable,<sup>24</sup> specific recommendations for federal policy include:

- An effort to improve math and science education. Sustained investment in basic research in the physical sciences and engineering, paired with focused attention to improving STEM education, is essential to ensuring continued U.S. scientific and technological leadership and to developing the next generation of scientists, engineers and STEM-literate Americans.
- Improving K-12 education. Modernize and strengthen the key elements of the Elementary and Secondary Education Act, including internationally benchmarked standards and assessments; better measures of performance, particularly for teachers and administrators; and a greater focus on K-12 STEM education.

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<sup>24</sup> <http://businessroundtable.org/studies-and-reports/roadmap-for-growth-education/>.

- Expanding incentives both for innovation and for scaling up proven programs in K-12 education. Continue to invest in competitive programs that focus on performance and encourage innovation such as Race to the Top, Teacher Incentive Fund, Investing in Innovation and expansion of high-quality charter schools. Race to the Top, in particular, promotes promising policy changes long advocated by the business community.
- Promote a Race to the Top competition for two- and four-year colleges that focuses on completion rates and attainment of credentials valued by employers. Increasingly, education is synonymous with workforce development for Americans who are currently employed as well as for Americans who have lost jobs in shrinking occupations. Incentives at community colleges and four-year institutions need to shift from rewarding enrollment to rewarding completion.

#### **4. From the Center for Law and Social Policy:<sup>25</sup>**

- WIA should focus on providing high-quality job training and education that result in employer-recognized credentials and lead to family-supporting wages and benefits.
- The act should place greater priority on helping low-income youth and adults and individuals with barriers to employment enter and succeed in the labor market.
- A central part of WIA's mission should be helping low-wage workers stay employed and advance to better jobs.
- Congress should strengthen WIA's catalytic role in increasing regional productivity and competitiveness.
- Congress should require investment in research and improved data reporting.
- Congress should increase financial support for this severely underfunded system.

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<sup>25</sup>Testimony by Evelyn Ganzglass, Director, Workforce Development Center for Law and Public Policy, before the House Subcommittee on Higher Education, Lifelong Learning, and Competitiveness. Washington, D.C., June 27, 2007.

## Conclusion

At the conference held in Wisconsin between education and business leaders in that state, the attendees found much on which they could agree:

“[T]he unanimous consensus of the participants,” a white paper released after the conference stated, “is for this type of dialogue to continue. The ongoing discussions should produce specific strategies for addressing each of the issues and implementing the recommendations.”

The recommendations that came out of the conference included:

- Establishing a cooperating higher education learning community that encompasses technical colleges and schools, universities and employers so that they could together take responsibility for preparing workers for the 21<sup>st</sup> century;
- Redefining educational success, building a learning system focused on competencies rather than “seat time” or credit hours;
- Education and business working together to promote the importance of technical education and skills training to the general public; and
- Both groups working together to partner on state and federal advocacy efforts to ensure that funding, policies and resources are all in place.

Conference participant Lee Rash of Western Technical College put it succinctly when he said the priority for education must be “letting go of old models and focusing on global learning communities, tapping into the vast amount of knowledge in the world globally. *Colleges and employers can be a learning community where we learn from each other.*” [Emphasis added]

In fact, the voices from both the CTE and the business communities calling for more cooperation and a greater focus on skills and technical training have been getting stronger for some time.

The National Commission on Excellence in Education noted in 1983 that “Our nation is at risk. Our once unchallenged preeminence in commerce, industry, science and technological innovation is being overtaken by competitors throughout the world.” The author later writes, “Instruction in effective study and work skills, which are essential if school and independent time is to be used efficiently, should be introduced in the early grades and continued throughout the student's schooling.”

Testifying before Congress in 2007, Evelyn Ganzglass, Director of Workforce Development, Center for Law and Social Policy, said:

“The workforce system is critical to helping job seekers and workers succeed in today’s global economy... the system should work with employers, preferably on a sectorial basis, to improve workplace practices, including creating internal career ladders, offering competitive wages and benefits, providing on-the-job training and informal apprenticeships, linking training to advancement, cross-training employees, [and] implementing a mentoring program [among other recommendations]”

Don Peck, wrote the following in “Can the Middle Class Be Saved?”<sup>26</sup>

“We have beaten the drum so loudly and for so long about the centrality of a college education that we should not be surprised when people who don’t attend college—or those who start but do not finish—go adrift at age 18 or 20. Grants, loans, and tax credits to undergraduate and graduate students total roughly \$160 billion each year; by contrast, in 2004, federal, state, and local spending on employment and training programs (which commonly assist people without a college education) totaled \$7 billion—an inflation-adjusted decline of about 75 percent since 1978.

A continued push for better schooling, the creation of clearer paths into careers for people who don’t immediately go to college, and stronger support for low-wage workers—together, these measures can help mitigate the economic cleavage of U.S. society, strengthening the middle. They would hardly solve all of society’s problems, but they would create the conditions for more-predictable and more-comfortable lives—all harnessed to continuing rewards for work and education. These, ultimately, are the most-critical preconditions for middle-class life and a healthy society.”

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<sup>26</sup>op. cit.