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Policy Paper: Career and Technical Education

MAKING THE CONNECTIONS:

NEW APPROACHES TO ACQUIRING SKILLS AND BUILDING CAREERS IN A 21ST CENTURY GLOBAL JOB MARKET

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Introduction

February is Career and Technical Education Month in the U.S., an annual celebration sponsored by the national Association for Career and Technical Education (ACTE). The event is designed to highlight the vital importance of technical training and career development for U.S. job-seekers in today's much more competitive, high-tech and increasingly more inter-connected global employment market.

Given the rapid pace of technological development over the past few decades, combined with the high unemployment rates that have hobbled the U.S. recovery since the start of The Great Recession, it should hardly be necessary to promote the need for career and technical education.

It should be clear to everyone that the nation's future economic success depends to a large degree upon a more comprehensive and inter-connected job skills acquisition system – one that can match U.S. job-seekers seamlessly with the training and education they need to obtain well-paying, family-sustaining jobs in today's fastest growing technology fields.

Unfortunately, events like CTE Month are still necessary, as too many people still confuse this now vibrant and vitally important sector with what used to be called "vocational training." Fortunately, many people in all three sectors of the education community – public, private and non-profit – have been working quietly over the past decade to explore and develop new ways of making career, technical and adult education programs more efficient and responsive to the needs of both job seekers and employers.

These efforts, among others, have included:

- A new industry sector approach to job training called "Career Pathways" that has been tried and proven successful at increasing employment in several cities and states;

- A multi-state consortium that has established common standards for a Career Readiness Certificate that employers count on to validate work and job-training readiness; and

- A new approach from McGraw-Hill Education -- Contemporary Workforce Connects™ -- that coordinates and connects for the very first time all facets of the search for work with the resources and curriculum necessary to acquire basic skills, contextualized to specific occupations, which applicants need for workplace success.

For these new approaches to take root and find support, the general public needs to know more about skills training and career development – its past, its present, why it is so necessary for our future – and how it could address many of the economic ills facing our nation today by preparing our people for the new high-tech and better paying jobs of the new century.

From "Vocational Training" to "Career Development"

The Association for Career and Technical Education began life, in fact, as the "American Vocational Association" in 1926, just ten years after the U.S. government began funding what it still calls today "vocational training." ACTE, closer to the action and more in tune with the times, changed its name to eliminate the now discredited word "vocational" in 1998.

To the federal government's credit, President Richard Nixon did suggest re-naming vocational training "Career Education" in 1970, noting that the word "vocational" is too often "foolishly stigmatized as being less desirable than academic preparation, …"[i]

The stigma attached to technical training and adult education stubbornly persists today, more than forty years later.

Many of the highest level officials who currently set education and labor policy are college graduates from the time when vocational training and adult education were viewed as "less desirable than academic preparation." That could help explain why government investment in workforce development for young people has fallen precipitously, from about $1.6 billion in 1994 to $900 million in 2010, an actual drop of 70 percent when one considers gross domestic product doubled during the same period.[ii]

Similarly, the number of adults receiving training under the Department of Labor's Workforce Investment Act Title I programs declined 26 percent between 1998 and 2004,[iii] and the overall enrollment in the Department of Education's state grant program decreased nearly 10 percent between 2001 and 2007, to only about two and a half million adults, "a small fraction of the 88 million adults [in the U.S.] with at least one educational challenge" to landing a good job.[iv]

The Obama administration has taken important steps to reverse these trends during its first two years, opening up Pell grants to adult learners and forging connections between the Departments of Education and Labor on technical training and adult education funding and initiatives. This includes the Community College and Career Training Grant Program, which released $2 billion in funding in January 2011. Yet much more remains to be done.

At the same time that our investment in building a skilled workforce was declining, the percentage of jobs described as "skilled" continued to increase, rising from 15 percent of all jobs in the 1950s to 85 percent of jobs today.

Our nation's businesses need skilled workers to continue producing goods and services marked by innovation, knowledge and quality – the characteristics that have given U.S. firms a distinct competitive edge in the global marketplace in the past.

To continue building a skilled workforce, it is essential that we must provide greater support for career and technical education, and re-think, re-design and re-connect the entire system that seeks to train both high school students and adults for better-paying careers in growth industries. Technological development and global economic trends are moving so fast today, in fact, changing the very nature of employment and lifelong career management so completely, that even the new name – "Career and Technical Education" – is beginning to sound somewhat old-fashioned.

Perhaps in acknowledgement of this, ACTE leadership describes their organization on their website today as being "dedicated to the advancement of education that prepares youth and adults *for successful careers*" [emphasis added] – avoiding the word "technical" in that core descriptive sentence altogether.

U.S. Education is Not Adequately Preparing People for Either College or Work

Adding to persistent misconceptions about the current nature and importance of career and technical training are disturbing trends in education. These include:

- More than 7,000 high school students drop out each school day by some estimates[v];

- The large and growing number of high school graduates who are nevertheless unprepared for college, with one in four quitting halfway through their freshman year – one in three when you factor in two-year community colleges[vi];

- The remarkably high percentage of college freshman who must take non-credit remedial classes to learn what they should have learned in high school, up to an astounding 40 percent at public two-year colleges; [vii]

- The fact that 88 million U.S. adults have at least one major education barrier to employment (e.g., no high school diploma, no college study, and/or do not speak English well),[viii] and that 93 million score at lower levels of national assessments of functional literacy skills;[ix]

- The severe over-crowding and long waiting lists for adult education and English language programs across the country, with one recent survey showing that approximately 160,000 potential learners are waiting for openings, while the number of months applicants stay on waiting lists has doubled since 2008[x]; and

- The corresponding sharp rise in applications to community colleges, which began turning students away for the first time in 2009,[xi] overwhelmed by the large number of both recent high school graduates and returning older students seeking to improve their job and career prospects without incurring the large student loans often necessary to attend a four-year college or university.

U.S. Secretary of Education Arne Duncan has said that the current state of our nation's education system is "economically unsustainable and morally unacceptable."[xii] It's a strong statement that is difficult to dispute given the facts noted above.

Skilled Workers -- A Growing Demand but a Dwindling Supply

It seems counter-intuitive to believe that with unemployment higher than nine percent in many parts of the United States, employers would be concerned about finding workers for the jobs they need to fill, but that is indeed the case.

A high percentage of employers – 61 percent in one survey[xiii] – report they cannot fill many job openings, despite high levels of unemployment, because too many applicants simply do not have the basic English or math skills necessary to either perform a job or be successfully trained for it.

Even before unemployment began to rise to near double-digits in 2008, employers were having a difficult time finding qualified employees – and still are. When the economy ultimately recovers, this employment crisis will only deepen, as demand for skilled,

trained, work-ready employees will increase sharply. Unless we change how we educate and train our students and adult workers in the U.S., however, the supply will not.

Almost half of all new job openings today require more than a high school education,[xiv] a trend the U.S. Bureau of Labor Statistics says will continue for at least the next five years.[xv] The Georgetown University Center on Education and the Workforce predicts that to meet the demand, the United States will need three million more associate degrees or higher than current trends in graduation rates forecast – a 10.6-percent increase in the number of students graduating each year through 2018.[xvi]

Yet, there is little hope of reaching those numbers if we stay on the same course. Based on current trends in worker retirement, education dropout rates, the declining number of skilled workers and other demographics, the U.S. Department of Labor is predicting a shortage of "more than 35 million skilled and educated workers over the next 30 years.[xvii]

Citing statistics from the National Center for Higher Education Management Systems, the National Commission on Adult Literacy notes that "Even if every state's high school graduation and college-going rates were equal to the top states in the country today, the United States still will not be able to meet its demand for skilled workers."[xviii]

Other economic and demographic trends add to the growing crisis brewing in the U.S. labor market, including:

- The rapid growth of the service sector, leading to increased demand for workers with strong English-language and interpersonal job skills;
- Increasing competition for both manufacturing and now even some service jobs – such as copy editing, graphics and consumer relations – from other countries;
- The aging of the U.S. population and the coming mass retirement of the Baby Boomers;
- The exponential growth of immigrant and non-English-speaking groups in the U.S., with the Hispanic share of the U.S. population alone expected to increase from 14 percent in 2005 to slightly more than 20 percent by 2030,[xix] when more than one of every four people in the U.S. will be of Asian or Hispanic origin[xx]; and
- The low rankings of U.S. students internationally, including the following facts:

- Among the 30 member countries of the Organization for Economic Cooperation and Development, the U.S. ranks 11th in the percentage of adults with a high school diploma;

- The U.S. is the only country where younger adults are less educated than the previous generation; and

- Results from the most recent Program for International Student Assessment (PISA) tests, which rank U.S. students 17th in reading, 23rd in science, and tied with Ireland 32nd place in math.[xxi]

Taken all together, these trends indicate we currently have the makings of a "perfect storm" in U.S. career skills training and readiness – one that could sink any hopes the nation might have of re-establishing either its economic vitality or its future prospects as a global leader in innovation and job creation.

Jobs Will Follow the Trained and Educated Workers

Global corporations and even smaller U.S. start-ups now have the option of taking their high-tech, better-paying jobs to wherever there are people capable and sufficiently educated to perform or learn them. The U.S. is still an attractive place to do business in many ways, and those jobs could stay in the U.S. – or even come to us from other nations – if we begin making it easier for our workers to find and develop the career and skills training they need. But those better-paying jobs will go instead to China, India, Korea, Germany, Finland and a host of other countries that already make that kind of investment in their people if we do not.

In his best-selling book 2009, *Hot, Flat and Crowded*, New York Times columnist Thomas L. Friedman quotes a former global corporate executive who notes the U.S. failure to adequately educate and train its people is "the largest contributing factor" to the decline of U.S. worker competitiveness around the world."

"This loss of competitiveness," Friedman writes, "has weakened the American worker's production of wealth, precisely when technology brought global competition much closer to home." [xxii]

The Solutions

Fortunately, there is still hope of turning the situation around and building a better jobs future for the U.S.

From President Obama and the federal government – from states, business leaders, non-profit educational organizations and education publishers like McGraw-Hill – people who care about America's future are beginning to explore and develop new ways of making

career, technical and adult education programs in the U.S. more efficient and responsive to the needs of both job seekers and employers.

In addition to the three initiatives mentioned earlier:

- "Career Pathways" and sector-based job training programs;
- The multi-state consortium in support of the Career Readiness Certificate; and
- The brand new, comprehensive approach from McGraw-Hill Education – Contemporary Workforce Connects, ™ – that coordinates and connects for the very first time all facets of the search for work with the resources and steps necessary to acquire the specific skills and training applicants need for specific occupations, contextualizing subjects such as math and English to make them more immediately relevant to a learner's target occupation

We can add coordinated efforts on several fronts to:

- Upgrade the standards for obtaining a GED® credential while making the process of preparing for and taking the GED Tests more available to more people;
- Provide more support and resources to community colleges, which according to the U.S. Business Roundtable have "untapped potential … to encourage more people to embrace postsecondary education and to revitalize local economies;"[xxiii]
- Offer more online learning opportunities at community colleges, GED preparation, skills training and language course programs, to reduce the strain on resources and infrastructure, while also using the Internet to provide more job skills training information and career guidance;
- Provide more online professional development opportunities for instructors of GED Test preparation courses, adult basic education classes, and transition/bridge programs; and
- Additionally, raise public and professional awareness of the skills and education required for current and future careers.

1. Sector-based Programs

Sector-based programs – sometimes called Bridge Programs because they often focus on training applicants for particular industries – are a new way of looking at career and technical education, which is more in tune with the realities of today. These programs focus on creating Career Pathways for individual learners.

Career Pathway proponents insist that career and technical education needs to be just as rigorous as academic programs while providing students and adult learners with more flexibility, contextualized learning and on-the-job experience. They believe that learners who can achieve both academic and career education will have the best chance of succeeding at all post-secondary options –college, further job training or an entry-level job.

A 2010 study conducted by Public/Private Ventures has demonstrated superior results from "industry sector-focused" Bridge Programs,[xxiv] echoing earlier studies conducted by the Workforce Strategies Initiative of the Aspen Institute, which looked at several such programs and found strong outcomes "in terms of program graduates' earnings and entry into positions with higher than normal job quality, as measured in terms of benefits like health insurance, vacation, and career ladders.[xxv]

2. The Career Readiness Certificate

In the last century, employers regularly assumed that a high school graduate could read and understand basic math sufficiently to begin an entry-level job or training for a more advanced position. Sadly, that is no longer the case.

The National Commission on Adult Literacy has noted that "[to] prepare substantially more adults for postsecondary education and workforce readiness, we need an aggressive approach that leads to the acquisition of credentials, certificates," [xxvi]as well as diplomas. Even a bachelor's degree is no longer a sure guarantee of employment or even job-readiness, as employers focus less on today "what do you know" and more on "what can you do with what you know?"

The Workforce Development Strategies Group (WDSG) and the National Center on Education and the Economy (NCEE) recommend that, "because credentials are quickly becoming the new currency with employers for reflecting skill acquisition, we advocate for the awarding of certifications to document the progressive accomplishments of individuals, beginning with nationally recognized career readiness credentials ..."[xxvii]

According to the Georgetown Center for Education and the Workforce, employees who complete certification programs earn on average $26,328 per year compared to

an average of $15,154 for those who only complete high school.[xxviii] However, certificates and other credentials often have little or no value because they are not held to nationally or internationally accepted standards and are consequently not recognized by employers or education institutions

It was in response to all of this that the Career Readiness Certificate was born.

First proposed in Virginia in 2004 at the request of Gov. Mark Warner as an economic development tool that could provide Virginia workers with a portable skills credential, the idea quickly spread, and a CRC Consortium of seven neighboring states was in place within six months.

By 2006, the number of states involved had increased to 42. During those years, CRC recipients used their Career Readiness Certificates for the purposes of employment or promotion, carrying their credential across state lines when necessary.

There are now 23 states issuing the Career Readiness Certificate, 14 that are in the process, and another 12 that are interested. As of March 2010, more than one million certificates have been issued nationwide.

The CRC is a skills certificate that certifies both ability and a readiness to learn. It is transferable, stackable and transportable, and when it is combined with an academic credential such as a high school diploma or GED Credential, it provides a foundation upon which people can build their careers.

3. Re-inventing the GED Tests

The original GED Tests were adopted in 1942 for members of the armed forces returning from World War II who did not have time to finish high school before enlisting in the military. Many people believe the initials GED stand for “Graduate Equivalency Diploma” or even the “Good Enough Diploma,” but GED in fact stands for “General Educational Development.” The five tests that must be passed to earn a GED Credential are administered and certificates issued by the American Council on Education.

New York became the first state to offer GED tests to civilians and by 1974 the program was recognized in all 50 states.[xxix]

The GED is a useful option for many whom for one reason or another dropped out of high school before graduating. However, two major problems have plagued the program in the past few decades: 1. A perception that that a GED credential, like a high school diplomas today, does not guarantee proficiency at basic reading and

math skills; and 2. Accessibility – waiting lists for GED preparation classes and tests can be very long and daunting for people who already feel overwhelmed by the difficulty of overcoming their lack of formal education.

The New York State passing GED score is currently only equivalent to an eighth grade proficiency level in reading and math, and students can pass the writing section with only a sixth grade level proficiency. At present, people wishing to enroll in a GED preparatory class must often find their way through a baffling system without much guidance. In New York City, for example, there is no single phone number, web site or other centralized source of information.

As a result of these and other issues, the number of people taking and passing the GED Tests hit a peak in 2001 at just over one million (taking the test) and 600,000 (passing), and those numbers dropped significant by 2006, with just over 600,000 taking the test and fewer than 400,000 receiving a certificate.[xxx]

However, a pilot program is currently underway in New York City to develop an accelerated learning program that could prepare more GED candidates for careers and college by making the program more rigorous academically, aligned with the Common Core education standards adopted by New York and other states, as well as easier for candidates to navigate.

In announcing a three million dollar grant for the new program in October 2010, U.S. Secretary of Education Arne Duncan said, "The GED needs to be more than a certificate of completion. It needs to be a passport to college and careers."[xxxi]

4. Community Colleges

The average total cost to attend a two-year public college was just $6,810 as of 2007,[xxxii] making community colleges one of the most cost-effective ways of obtaining the kind of job skills employers look for in their new hires. These two-year institutions now serve about half of the current undergraduates in the United States, often as a starting point for students who will subsequently pursue a bachelor's degree.[xxxiii]

Businesses recognize the value of a community college education, paying a 49 percent premium for associate degree holders.[xxxiv]

According to a Brookings Institution report, federal spending on four-year colleges was four times higher than spending on community colleges between 2002 and 2006. As funding for four-year institutions has increased during this period, spending on community colleges fell 6%.[xxxv]

To help reverse this trend, the Obama Administration announced the launch of a new program in October 2010 – Skills for America's Future – a public/private partnership that seeks to improve industry and local employer contacts with community colleges and build a nationwide network that will maximize workforce development strategies, job training programs and job placement.

The initiative is based at the Department of Labor, but implemented in close cooperation with the Department of Education, demonstrating a welcome and long-overdue coordination between these two government agencies when it comes to job training and career development.

Community colleges need and deserve more support, particularly now as the current enrollment boom sparked by the weak job market has put a tremendous strain on college resources and infrastructure – a problem that could be alleviated with a greater reliance on online learning.

5. Online Learning and Resources

Online learning has tremendous potential for education in general – from K-12 through post-graduate study, but it is perhaps particularly valuable for those seeking to learn technical skills or study for the GED Tests.

Adult learners, in general, must often hold down jobs or tend to family responsibilities that make it difficult for them to attend classes during regular times. According to one estimate, 75 million working learners are balancing work, school, and family.[xxxvi] Online learning offers the flexibility many people need to improve their job and career skills on their own time and at a reduced cost.

Statistics show that online learning certainly has the ability to increase the number of U.S. job-seekers with GED credentials, post-secondary degrees and other credentials. Online enrollments grew 9.7 percent annually from 2002 to 2006, a huge increase over the 1.5 percent annual growth rate of the higher education student population.

In addition, 83 percent of institutions with online offerings have indicated they expect their online enrollments to increase.[xxxvii] And studies have shown that students who take all or part of their classes online perform better, on average, than those who take a traditional, face-to-face course.[xxxviii]

One study that has been ongoing in Portland, Ore., for more than a decade – the Longitudinal Study of Adult Learning – has been collecting information about adult literacy and learning since its beginning. One area of particular interest to this

discussion is the use of computer technology among adults in the target population, all of whom are seeking to gain job skills or prepare for the GED Tests.

Specifically, this target population comprises residents of the Portland metropolitan area selected for the study, 18–44 years old, who are proficient but not necessarily native English speakers. They are not in high school nor have they received a GED or other high school equivalency credential when first recruited for the study. Participants are interviewed and assessed in "waves" or cohorts, determined by their entry into the multi-year study.

> By Wave 5 in 2004, 88% of the population was computer users, a dramatic increase from the 38% who were computer users when the study began in 1998. Seven in ten (71%) had computers in their homes, 90% of which were used by the respondents themselves. An October 2008 report by the National Institute for Literacy on the skills required for online learning reports that based on the computer usage demonstrated in the study:
>
> > "There is no significant difference between men and women or between minority and non-minority group members in the percentage of computer users. A significantly lower proportion of individuals who report having learning disabilities are computer users (81%, versus 91% of those not reporting learning disabilities), but the overall rate is still quite high. The penetration of computers into the LSAL population has evidently progressed quite far in the Portland area, ***but all indications are that this trend is growing around the country"*** [Emphasis added.][xxxix]

The study also found that literacy thresholds did not exist, i.e. learners at even the lowest levels of literacy and language proficiency had the potential to engage with online learning content. In fact, all reports indicate they are eager to do so, and benefit in important ways such as self-confidence, self-directedness, and independence.

Online learning has the ability to make career and technical education a lifelong process that keeps pace with the speed of change in business and society. It can provide greater access and knowledge resources to adult students in real time, help working adults with childcare and transportation issues. It also helps students to learn to work in virtual teams with video conferencing and collaboration software. And it has the ability to make the highest quality teachers in the world available to everyone with a computer and an Internet connection.

6. McGraw-Hill Education's Contemporary Workforce Connects™

All of the solutions mentioned above – from Career Pathways and sector-based learning, to the Career Readiness Certificate and online learning – represent important pieces of the puzzle. But perhaps the most critical piece is the last – the one that brings it all together into one, clear picture.

This is what McGraw-Hill Education's new program – Contemporary Workforce Connects™ – was designed to do.

Currently, it is tremendously difficult to identify and track career development and job opportunities. There are an estimated 375,000 small companies and start-ups in the U.S.,[xl] most with fewer than 100 employees. Simply by virtue of their size, they are difficult to find. Similarly, Americans who want to further their education and training often complain they do not have adequate information to make decisions.

In March of 2010, the Center for American Progress published a report titled "A New National Approach to Career Navigation for Working Learners." Authors Vickie Choitz, Louis Soares and Rachel Pleasants argue strongly that the U.S. needs a national, integrated approach to job skills training and career navigation. A system, they write, that would "focus on ensuring that any worker, at any time in his or her career, could get information and resources for making smart career decisions."

The system they envision would also "provide assessment tools to help people better understand their own strengths, weaknesses, skills, and interests." It would offer easily accessible data on a wide range of career options and local labor market opportunities, as well as information on the education and skills required for those jobs. People accessing the system would be able to find information on specific local education and training programs, including course offerings, graduation rates, and financial aid.

We agree, and believe that the ideal system of career, technical and adult education management must not include multiple silo'd programs with different eligibility requirements, different reporting systems, and different performance metrics. Instead it needs to become one comprehensive and inter-connected platform that integrates all of these services, programs and missions.

This is precisely the goal behind Contemporary Workforce Connects™ – to systematize the entire process and to resolve the many issues and confusion of job-seekers, who are often overwhelmed and have difficulty finding the assessment tools, basic skills instruction, remediation, and resources they need within a contextualized learning environment.

Workforce Connects™ bridges the gap and makes connections between job seeker and employer; and between learners and the skills needed to get the job. So, the employer says "this is what I need;" the learner assesses what skills he/she has and

learns which skills are needed to qualify. Most importantly, Workforce Connects™ guides learners and job seekers on the path to obtaining those skills and puts everything they need at their fingertips.

Conclusion

The National Commission on Adult Literacy has said that basic education deficiencies affecting 80 to 90 million U.S. adults pose a danger to our country, one that could rob us of our future. In the 2009 report titled "Reach Higher, America," the Commission states that:

> "We face an adult education crisis that permeates every dimension of American life. It saps the energy and capability of our people, our economy, and our institutions. It feeds our national unemployment, the welfare rolls, and our correctional institutions… If we fail to act, not only will we lose our ability to compete in the world marketplace, we will be unable to maintain our standard of living, preserve our democratic principles, or protect national security."

There is still time to ensure a different future – one that includes prosperity and high employment – but only if we act now to change our current system of career, technical and adult education so that every American citizen who wants to improve his or her job opportunities and career skills has the means and a clear pathway for doing so.

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