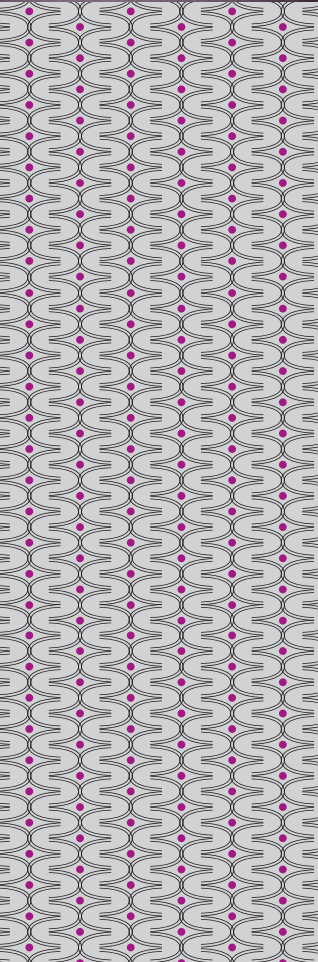


## Career and Technical Education's Role in Workforce Readiness Credentials

### IN THIS BRIEF:

This issue brief will explore the important role that career and technical education plays in the continued expansion and value of workforce readiness credentials. CTE programs contribute to the growth of these credentials by helping students apply academic and employability skills, providing opportunities for preparation and assessment, and connecting with business and industry to increase employer support.



What standards of work and career readiness apply to the educational system and how can employers be sure that individuals are ready for work? Since the 1982 release of the U.S. Department of Education report *A Nation At Risk*, the first prominent report on the mediocre attainment of skills in the American educational system, this issue has been at the center of education and workforce development policy discussions.

As the global economy has gained strength and businesses and industries increasingly seek employees with higher levels of expertise, a national movement to ensure a steady supply of skilled workers has grown. Many employers, states and localities are turning to workforce readiness credentials to validate common workplace skills in job applicants and employees, and in

turn, education and workforce agencies are responding by issuing or preparing students for these credentials.

## THE CONCERNS

### THE GROWING SKILLS GAP

In a very short time, America has evolved from an industrial economy to a knowledge economy. Since the early 1990s, the pace of change in the global economy has accelerated even further, given the “flattening forces” spoken of in recent economic analyses. The globalization of business and industry requires workers to acquire core knowledge and skills that can be applied—and quickly upgraded and adapted—in a wide and rapidly changing variety of work settings.



“The shortage of qualified workers is truly widespread, impacting companies regardless of size, industry, or geographic location.”

—NATIONAL ASSOCIATION OF MANUFACTURERS

Unfortunately, the skills of Americans have not kept pace. More than 80 percent of respondents in the 2005 National Association of Manufacturers *Skills Gap* report indicated that they are experiencing a shortage of qualified workers overall – with 13 percent reporting severe shortages.<sup>1</sup> The U.S. Chamber of Commerce also reports a growing skills gap. In the 2002 *Keeping Competitive* report, 73 percent of employers reported “very” or “somewhat” severe conditions when trying to hire qualified workers.<sup>2</sup>

In fall 2006, an American Society for Training and Development Public Policy Report, “Bridging the Skills Gap” defines a skills gap as “a significant gap between an organization’s skill needs and the current capabilities of its workforce. It is the point at which an organization can no longer grow and/or remain competitive in its industry because its employees do not support the organization’s strategies and goals.”<sup>3</sup>

The changing nature of jobs, education that lags behind skill needs, a slow rate of growth in the workforce and ineffective training investments by employers all cause skills gaps. As a result, employers experience limited innovation and growth and lower productivity and profits. The gap in employee skills impacts the local, state and national economy.

## THE NEED FOR SKILL STANDARDS

Employers have reported that the most important skills employees need more of include technical skills, strong basic employability skills, and reading, writing and communication skills.<sup>4</sup> While traditional education programs and assessments may address some of these skills,

few provide comprehensive training across the skill spectrum. There is a growing discussion, influenced by legislation, a cadre of reports, and the interest of business-education and governmental partnerships, around the need for skills standards in all of these areas of American education and training.

Legislation including the Goals 2000: Educate America Act of 1994, School-to-Work Opportunities Act of 1994, Workforce Investment Act of 1998, No Child Left Behind Act of 2002, and Carl D. Perkins Career and Technical Education Act of 2006 have all focused on increasing and measuring skills needed in education, work and life.

Efforts emerging from these laws have included a National Skill Standards Board, created to develop occupational standards for broad occupational clusters, supported by a system of standards and certification; higher standards of achievement and accountability for every child through rigorous educational standards and assessments in reading and math; a stronger emphasis on strategies that help students graduate from high school with skills for success in both college and work; and increased requirements to measure skills gains of youth and adults in workforce development programs.

Other national efforts have also shaped this movement. In 1996, the nation’s governors, working with prominent business leaders, started Achieve, Inc. to raise academic standards, improve assessments and strengthen accountability in states across the nation. National Education Summits, the American Diploma Project and reports such as *Closing the Expectations Gap 2007* have all resulted from this unique partnership.

Education, business and government banded together in 2002 to form the Partnership for 21st Century Skills to vision, articulate and advocate the educational skills that students need to be learners, workers and leaders in this century. The Partnership includes an impressive array of the nation’s top businesses, along with the Council of

Chief State School Officers and the International Society for Technology in Education.

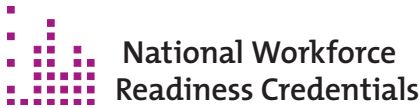
**MEASURING WORKFORCE READINESS SKILLS**

Out of these numerous efforts, the concept of a “workforce readiness credential” has emerged to attempt to validate work-ready skills. Jobs for the Future suggests that these skills be defined as a baseline of hard and soft skills that are transferable from one position to another across industries.<sup>5</sup> ACT similarly points out that the skills are valuable for “any occupation—skilled or professional—and at any level of education.”<sup>6</sup>

Numerous assessment approaches have been developed in states and localities around the country, and are offered by various entities, including high schools, community colleges, employers, Workforce Investment Boards, and other state and local organizations.

National assessments include the ACT National Career Readiness Certificate™ (based on ACT WorkKeys®), National Work Readiness Credential, CASAS Workforce Skills Certificate and SkillsUSA Workplace Readiness Certificate. While still in the early stages of development in many areas, these credentials are working to gain acceptance around the country. Currently, the National Career Readiness Certificate™ has been the credential most widely adopted. It has been adopted on a statewide basis in 15 states, with local acceptance in at least 19 additional states. Over 150,000 National Career Readiness Certificates™ have been issued nationwide.<sup>7</sup>

While each of these assessments reflects and builds upon skills cited in the literature since the 1980 and is based on industry input, they differ in their assessment objectives and skills measured. The national assessments, and others developed in different regions of the country, reflect different combinations of required skills, and must be evaluated by potential users for their value in the specific education setting and employment environment. Once selected, a



ACT National Career Readiness Certificate™ <a href="http://www.nationalcareerreadiness.org">www.nationalcareerreadiness.org</a>
National Work Readiness Credential <a href="http://www.workreadiness.com">www.workreadiness.com</a>
CASAS Workforce Skills Certificate <a href="http://www.casas.org">www.casas.org</a>
SkillsUSA Workplace Readiness Certificate <a href="http://www.skillsusa.org/educators/nocti.shtml">www.skillsusa.org/educators/nocti.shtml</a>

credential can drive the curriculum and instructional practices in education and training settings, helping to ensure that youth and adults have the skills really necessary to succeed in the 21st century economy.

**CTE'S ROLE**

Career and technical education (CTE) is critical in an individual’s journey toward total education and career success. Whether it is secondary students who need job skills to transition into the workplace, employees who need to upgrade skills, adults who need to achieve new skills for ongoing success or college graduates who want enhanced technical skills, all are served by CTE programs. It is through CTE programs that students, employees and other adults all gain the full range of skills necessary to be considered “workforce ready.”

CTE programs have also been on the frontlines of offering new workforce readiness credentials, and should be considered leaders in the growth of this endeavor. Nobel laureate Dr. James Heckman reports that the skills measured by workforce readiness credentials are just as important to a student’s future workplace success as more publicized academic indicators.<sup>8</sup> However, students often lack opportunities to gain these skills through traditional academic courses. CTE programs provide the relevance necessary to engage students, and the real-world situations that lead to workforce readiness skills attainment.





“Finally we have an assessment tool that allows the potential employee, the educator/trainer and employer, to all be on the same page.”

—TIM BURG, PONCA CITY DEVELOPMENT AUTHORITY, OKLAHOMA

Career and technical educators find value in using the workforce readiness credentials systems to improve student achievement and link learning to future study and careers. The formal credentials fill gaps in many state assessment systems that originated from state standards created under federal legislation, and provide clear links to business and industry needs for high school students and adults. CTE programs play critical roles in the growth of workforce readiness credentials by helping students apply skills, providing opportunities for preparation and assessment, and connecting with business and industry.

### HELPING STUDENTS APPLY SKILLS

Numerous research studies have shown that context is critical in the learning process. Context has been described as “the integral aspect of cognitive events,”<sup>9</sup> and the National Research Council and the National Academies of Science “encourage the design of engaging curricula that apply to real-world situations.”<sup>10</sup>

This is critical not only for traditional academic skills, but for workforce readiness skills as well. The national and state level credentials, while validating different skills, all attempt to verify that a student will be prepared to excel in the workplace, rather than an isolated classroom or testing center. Assessments that are utilized for these work readiness credentials assess workplace-related skills in as authentic an environment as possible, and include topics not typically addressed in academic environments, like locating information, listening, teamwork and observation. Assessments include workplace situational questions, case studies and work-

based scenarios. A new assessment being developed by SkillsUSA will even use animation and other similar visual affects to measure student knowledge.

In order for students to be successful on workforce readiness assessments, and in turn, in the workplace, skills must be gained in an environment that is relevant to the real world of work. CTE provides such an environment where students can apply fundamental academic skills and employability skills to complex job-related problems.

According to a report from the National Research Center for Career and Technical Education, “CTE courses inherently provide contexts for applied or experiential learning ...delivery of content area curricula within a relevant, authentic, and presumably more motivating context... the creation of explicit connections between situations is critical if students are to transfer their knowledge and skills outside the classroom, whether it is to another context or to an abstract testing situation.”<sup>11</sup>

While each workforce readiness credential or assessment validates a different set of defined skills, almost all include some focus on applying literacy and numeracy skills to typical work-related tasks. These skills are classified by many career and technical educators as “technical literacy.” The Southern Regional Education Board defines technical literacy as is the ability to 1) apply academic knowledge and skills to a broad field of technical studies; 2) read, understand and communicate in the language of the technical field; 3) understand technical concepts and principles; and 4) use technology to complete projects in a specific career/technical field.<sup>12</sup>

Skills related to technical literacy are taught and reinforced daily in CTE classrooms across the country, preparing students for workforce readiness assessment components such as the WorkKeys® “Reading for Information” and “Applied Math”, and the National Work

Readiness Credential's assessments "Read with Understanding" and "Use Math to Solve Problems."



As part of a West Virginia statewide effort to increase the rigor of CTE courses, the state has mandated that CTE students leave high school with certain types of credentials including program certification validating technical skills and a workforce readiness credential validating broader workplace readiness skills.

All CTE students who are program completers are offered the opportunity to earn "Ready-to-Work" workforce readiness credentials linked to the National Career Readiness Certificate™. Charles Pack, Assistant Principal at the Academy of Career and Technology in Beckley, West Virginia, believes this effort "came from the desire to make CTE more accountable for focusing on academic skills – not teaching the academics, but teaching students to use academics in a career."<sup>13</sup>

Certificates were awarded by the state workforce board for the first time in 2007, and around the state, CTE educators are working to prepare students for success on the assessment. A number of activities are being utilized in CTE classrooms to help students learn to apply academic skills to employment situations.

At Ralph R. Willis Career Center students maintain item banks of vocabulary words utilized in course lessons and write each week on a technical subject. At Roane Jackson Technical Center, journal writing and "technical words of the day" are utilized, and students at United Technical Center use targeted reading and math intervention software programs to enhance academic skills. Programs such as Automotive Technology and Collision Repair utilize related math textbook sections and work with math coaches to ensure student success.<sup>14</sup>

## PROVIDING OPPORTUNITIES FOR PREPARATION AND ASSESSMENT

According to the U.S. Census Bureau, in 2006, 28 percent of adults had received a bachelor's degree or higher<sup>15</sup>; the other 72 percent of Americans need other pathways to gain technical skills and additional education to be successful in the workforce. CTE provides the comprehensive preparation necessary for students to show that they do have the skills desired by business and industry, and the venues for offering assessments and credentials. CTE programs in high schools, community colleges and technical centers have all been involved in offering students the opportunity to gain

workforce readiness credentials.

In Florida, which has adopted a statewide Ready to Work Credential based on the National Career Readiness Certificate™, CTE programs are leading the way in implementation. Pasco County, Florida, has piloted the certificate program in two of its adult career centers, Marchman Technical Education Center and Moore-Mickens Education Center.<sup>16</sup> Training is provided to improve student skills, and students can receive a gold, silver or bronze certificate for their efforts. Lee County, Florida, is implementing Ready to Work through the district's career preparation academies in areas such as criminal justice, veterinary health, medical technology, engineering and automotive technology. Superintendent James Browder said the program would be an "added bonus" to the skills students are already receiving through the career academies.<sup>17</sup>

In Arkansas, a state that has also adopted a statewide Career Readiness Certificate program, Pulaski Technical College has been instrumental in offering a 20-hour pre-employment class to potential certificate candidates. The pre-employment course and certificate assessment are part of the screening process for local employer LM Glasfiber.<sup>18</sup>

Twelve Clarke County Schools in Athens, Georgia, implemented certificate efforts through a Pathways for Success program led by the CTE director for the district. The program was designed to strengthen academic performance and reduce the risk of dropping out by showing students that good jobs and careers are the end result of education. The program included academic curriculum, career exploration, and business and industry experience including tours, speakers and job shadowing. Pathways provided students with opportunities to see connections between theory and practice, and how their studies in middle and high school relate to the real world and their postsecondary educational and career plans.<sup>19</sup> CTE programs also play a unique role in the

expansion possibilities of workforce readiness credentials. Across the country, CTE programs are offered in about 11,000 high schools, including about 1,000 career and technical high schools and about 800 area career tech centers. About 9,400 postsecondary institutions offer technical programs, including community colleges, technical institutes and skill centers.<sup>20</sup>

There are over 15 million secondary and postsecondary CTE students nationwide.<sup>21</sup> These students have already shown a commitment to career preparation, and are in the process of gaining the skills necessary for future success. By utilizing CTE programs, more students at both the secondary and postsecondary levels can be given the opportunity to gain workforce readiness credentials.



Five Sacramento, California, high school career academies and an adult education program utilized the CASAS Workforce Skills Certification assessments primarily in health care, high tech manufacturing and banking. The project was a partnership with the Sacramento Linking Education and Economic Development (LEED) program to bring education and workforce development together.

LEED brings business and employers into the classroom setting and arranges internships, job shadowing and work-based learning experiences in addition to the LEED certification based on WSCS. LEED employer consortia work with the education community to drive activities surrounding construction, health care and telecommunications and technology in the fast expanding Sacramento area.

Brenda Gray, former executive director of LEED, explained the importance of the credential, “Students are excited because they finally see a reason for taking a test. They understand the difference—this assessment will give them a leg up in employment and when they apply for a college program. The audience for the test score is outside the school system—it’s not just a standardized test.” Over 40 large businesses in the Sacramento area agreed to accept the certificates of achievement from those who passed the CASAS Workforce Skills Certification assessments. These employers recognized that students with the credential had the skills necessary for success in entry-level jobs.<sup>22</sup>

## CONNECTING WITH BUSINESS AND INDUSTRY

The awarding of workforce readiness credentials in education and training programs has little value to students without the support of business and industry. While the skills learned are still vitally important to future career success, the payoff in the actual certificate or credential can only be realized with employer support leading to preferential status in hiring decisions.

Employers and employer groups continuously discuss the need for high-skill workers, and the rising costs of securing a talented workforce<sup>23</sup>; and the use of workforce readiness credentials can help to address both of these issues. However, even though many states are undergoing education campaigns, employers often do not understand the different credentials and what they mean, or may not even be aware that workforce readiness credentials exist at all.

CTE, due to its unique relationship with employers, is in a prime position to promote the use and value of workforce readiness credentials with the business and industry community. As the last National Assessment of Vocational Education (NAVE) found, “Not surprisingly, vocational teachers have significantly greater contact with representatives of business, industry, and labor than do academic teachers.”<sup>24</sup>

CTE educators engage in such diverse activities as working on advisory committees, referring students for job placements, having employers make presentations to students in class, having students visit employer work sites, and discussing workplace skill requirements with representatives from business and industry. Employers assist CTE programs with developing standards reflecting the needs of industry, especially at the state level, and 14 percent of all employers reported being a member of a CTE advisory committee in a Census Bureau Survey.<sup>25</sup>

All of these activities put CTE leaders in the perfect position to share information about workforce readiness credentials and to serve as conduits to the employer community. The connections with local business leaders allow the use of workforce readiness credentials to spread from the ground up in a way that is mutually beneficial to students and employers.



At the VF Jeanswear production and distribution center in central Oklahoma, the high cost of employee turnover was having a negative impact on profitability. H.R. Manager David Forgety began hearing about education

programs in the area offering students the opportunity to obtain the Oklahoma Career Readiness Certificate. An initiative of the Governor's Council for Workforce and Economic Development, the certificate was being offered by career tech centers and high schools throughout the state. This provided VF Jeanswear a unique opportunity to measure skills that could not be identified by an interview alone and that could help to ensure potential employees' success in the company.

VF Jeanswear went through a process of having jobs in its center profiled to determine necessary minimum skill levels, and then began working with nearby Gordon Cooper Technology Center to create a process by which the Career Readiness Certificate could be used as an initial screening tool prior to a job candidate's interview. Gordon Cooper served as a conduit to other community organizations and leaders to ensure that the necessary administration and testing was possible.

VF Jeanswear now has agreements with Gordon Cooper and Wes Watkins Technology Centers, as well as the local workforce One-Stop center, to offer the assessments necessary for an individual seeking employment at VF Jeanswear to obtain a Career Readiness Certificate. Different scores on the assessment are required for different job openings, and individuals who do not meet the standards on the assessments the first time are offered education and training through the KeyTrain system at the Technology Centers.

The pre-screening process has been in place since April 2007, and the biggest success has been in identifying employees that are able to meet learning standards, and reducing training costs. Forgety emphasized the need for business and education to work together to drive the spread of workforce readiness credentials. He explains, "This initiative needs to be talked about more. Business is looking for something to assess employee skills, and needs to know where to find this tool. It must be repeated multiple times to those making hiring decisions – people are busy and this is too important to get lost in the shuffle."<sup>26</sup>

## CONCLUSION

It is clear that 21st century employees need advanced skills to meet the needs of the U.S. economy. While academic and technical skills are critical, the importance of workforce readiness skills is also emerging to the forefront of skills gap discussions. Skills such as critical thinking, problem solving, applying academic knowledge and situational judgment are more important than ever to an individual's labor market success.

As employers seek ways to measure these skills efficiently and evaluate potential hires, the use of workforce readiness credentials is likely to increase. Workforce readiness credentials provide value added to the high school diploma and help adults to gain the skills necessary for workplace success. CTE is at the forefront of this increase, preparing students at all levels for the testing that leads to a workforce readiness credential, and perhaps more importantly, with the skills necessary for 21st century success.

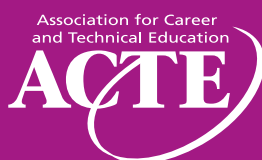
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