

# BRIDGING THE GAP: A CRITICAL PARTNERSHIP BETWEEN BUSINESS AND EDUCATION TO SOLVE THE SKILLS GAP



The IWNC is comprised of American business leaders who have the common goal of strengthening Career and Technical Education (CTE) in the United States. In partnership with influential educational organizations, the IWNC raises awareness of the importance of CTE in America, the benefits it provides for high school and post-secondary students, and the effects CTE has on the economy. By improving the image of CTE, the IWNC aims to gain both support for in the general public, along with local, state, and federal governments.

The Skills Gap facing the United States must be addressed. Our country's Career and Technical Education system is a structured approach to bridging that gap. Business leaders are partnering with Career and Technical Education to support and create awareness of these critical programs that are vital to preparing our pipeline of future workforce. The mission is to ensure youth are College and Career Ready and to help align education with the future needs of industry, providing opportunities for our youth and maintaining strong, productive industries.

## EXECUTIVE SUMMARY

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Our nation has reached a critical moment in our history as an economic and industrial leader. As America's workforce ages and technological advances continue, America will be left with shortage of skilled workers, a skills gap. The baby boomer generation is retiring at a rate that is outpacing the addition of new qualified workers. Both new and existing workers need new and innovating training to keep their skills current with new technology. This gap is projected to hit the skills jobs market the hardest. Middle skill jobs, those requiring education beyond high school but less than a four-year college degree, are projected to account for 45 percent of all job openings through 2014 (Bureau of Labor Statistics, U.S. Department of Labor, 2012), and only approximately 25 percent of the available workforce will be qualified to fill these positions.

Contrary to what one might expect, high unemployment is not providing the workers necessary to fill these open positions. Young people are not entering the market with the skills necessary for to work in these middle skills jobs and access the middle class.

Career and Technical Education (CTE) provides a structured solution to this skills gap. CTE, formerly known as vocational education, is an essential part of our education system, preparing youth and adults for wide ranging careers in the skilled trades and giving them the skills and hands on experience necessary for success in college or career. As technology has changed, CTE has evolved to align with vigorous academics and post-secondary paths. CTE provides a learning environment that provides the academics, employability, and technical skills required to create career-ready students. A link between education and business is essential to ensuring that CTE programs continue to educate a qualified and motivated workforce required for a thriving American economy.

Businesses must partner with education to develop successful alignments of curricula with business needs, raise awareness of the value of CTE programs, and showcase how critical Career and Technical Education is to bridging the skills gap and maintaining America as a leader in the global competitive market.

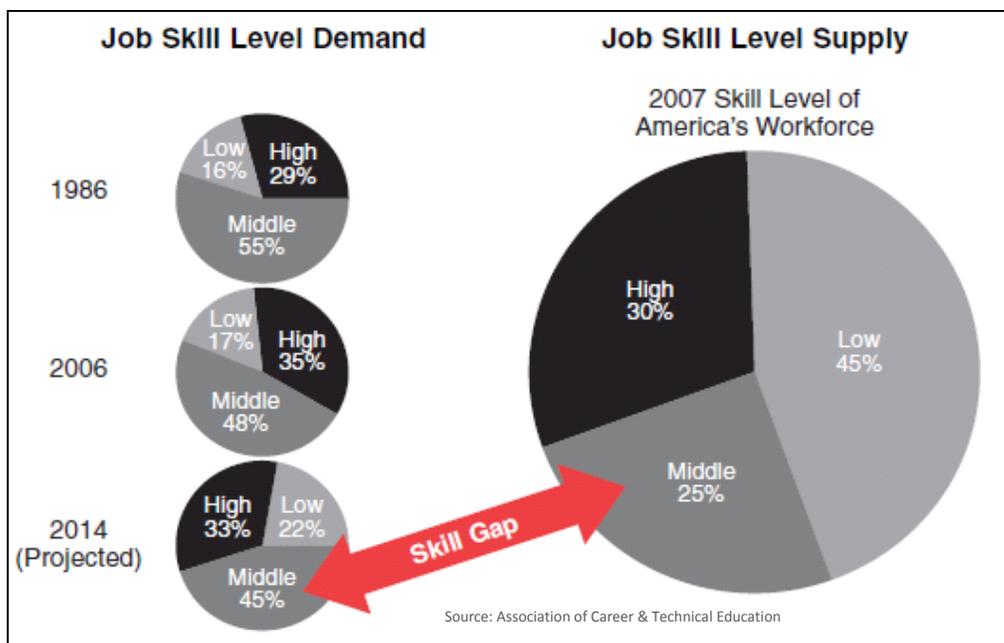
## THE SKILLS GAP DEFINED

America has reached a pivotal period in economic history. A gap in skills in America's workforce is coming, largely created from the retirement of the aging baby boomer workforce outpacing the incremental increase in skilled workers. Georgetown University projects, "The U.S. economy will create 46.8 million job openings by 2018, including 13.8 newly created jobs and 33 million 'replacement' positions produced when workers retire (Georgetown University Center on Education and the Workforce, 2010)."

As the existing workforce ages, a skills gap is created in two ways: as the baby boomer generation retires, their irreplaceable talents, skills, and knowledge leave with them. Before retirement, these workers, with limited time to recoup their investments in training, are understandably reluctant to learn new technologies or acquire new skills.

The Bureau of Labor Statistics projects that middle-skill jobs, those that require some significant education beyond high school but less than a four-year college degree, will account for roughly 45 percent of all job openings through 2014 (Bureau of Labor Statistics, U.S. Department of Labor, 2012). Postsecondary education and training beyond high school but less than a four-year degree is quickly becoming the most logical path to the American middle class.

"High unemployment is not making it easier to fill positions, particularly in the areas of skilled production and production support. As many as 600,000 jobs are going unfilled, a remarkable fact when the country is facing an unemployment rate that hovers above 9 percent. The national education curriculum is not producing workers with the basic skills they need – a trend not likely to improve in the near term (Morrison, Maciejewski, Giffi, DeRocco, McNelly, & Carrick, 2011)."



The number of young people prepared to satisfy our workforce needs is being developed at a slower rate than necessary. Businesses may outsource mission-critical skilled jobs to other countries if the skills challenge is not met by education and government leaders through focused and disciplined action. According to a study by the Georgetown University Center on Education and the Workforce, “by 2018 we end up with a shortfall of workers with Associate’s degrees or better of about 3 million (Georgetown University Center on Education and the Workforce, 2010).”

Our currently sluggish national economy may delay the larger projected skilled labor shortage, and one could argue that the new definition of retirement may also slow the pace of skill set losses due to baby boomer retirements, but the impending gap remains inevitable. Now is the time to consider how to best address these pending labor gaps that will threaten the United States’ ability to grow industry sectors and the economy over the next decade.

## CTE PROVIDES AN ANSWER TO THE SKILLS GAP

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In his State of the Union address on January 24, 2012, President Obama offered proposals to foster an economy ‘built to last’ predicated on education, a skilled workforce, high-paying jobs, energy independence, and fairness that would help bolster the middle class. Highlighting the skills gap, he stated, “Growing industries in science and technology have twice as many openings as we have workers who can do the job.” In an effort to solve this problem, he called for a national commitment to train two million individuals with the skills they need to land a job with a focus on partnerships between businesses and education.

While businesses are already feeling the pain of the skills gap, action to address the problem is only beginning. As identified in the 2011 Talent Shortage Survey by Manpower Group, “Approximately three-quarters of employers globally cite a lack of experience, skills or knowledge as the primary reason for the difficulty filling positions. However, only one in five employers is concentrating on training and development to fill the gap. A mere 6 percent of employers are working more closely with educational institutions to create curriculums that close knowledge gaps (ManpowerGroup, 2011).”

“Darlene Miller, CEO of Permac Industries in South Burnsville, Minnesota, said the days are long gone when a new hire could learn how to operate machinery on the job. Miller said she would add another half-dozen workers to her payroll of 38

workers — if she could find people already skilled at operating the high-tech equipment she recently purchased to boost productivity (Schoen, 2011).”

In the paper “Developing Human Capital: Meeting the Growing Global Need for a Skilled and Educated Workforce,” the authors identify Career and Technical Education as an area where business and education already overlap, and where additional emphasis could be placed (Bray, Painter, & Rosin, 2011).

“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 postsecondary 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.”

“It is not surprising that it is at the juncture between business and CTE where a frank and critical discussion about the future of education and its relationship to business and employment is occurring. 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 (Bray, Painter, & Rosin, 2011).”

## THE PARTNERSHIP IMPERATIVE – BUSINESS AND CAREER AND TECHNICAL EDUCATION

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Career and Technical Education, formerly known as vocational education, is the primary part of our education system that prepares youth and adults for a wide range of careers including health care assistants, skilled machinists, mechanics, culinary professionals, IT professionals, and engineers. Career and Technical Education has played an integral role in developing America’s workforce since the 1880s; its origins include apprenticeship and on-the-job training, forging a close relationship with business and industry. This important connection continues today and is necessary to ensure that education is viable and relevant to the workplace, local and national economies, and the future employability of our students.

As a result of the technological revolution, our workforce needs have changed dramatically over the past few decades. The branch of education that once focused only on vocational studies has evolved into today’s Career and Technical Education (CTE) to meet today’s workforce demands. The system is much more aligned with rigorous academics and has stronger secondary-postsecondary connections. CTE has undergone significant programming and technological changes to teach the new skill sets required by employers. It requires greater understanding and integration of science, technology, and math – not merely the abstract textbook understanding of these disciplines, but how to apply this knowledge to tangible output.

CTE provides a unique learning environment that, much like a business, allows a breadth of exposure to the combination of academic, employability, and

technical skills required to create career-ready students. For example, a typical CTE class today may require the use of computer-aided design (CAD) software (math and technical skills) to create the plans for a project that will be made via a computer numerical controlled (CNC) tool (science and technical skills). The natural integration and application of Science Technology Engineering and Math (STEM) skills is required to create the output. Students often work in a project-based environment where they interact together to solve problems, much like the workplaces of today (employability skills). This experience and exposure creates future engineers, CNC machinists, and CNC operators, not to mention a myriad of other workers prepared to enter a manufacturing world.

The question we should be asking of education today is whether it delivers the knowledge and skills required to provide economic health and viability to individuals, employers, and our nation. Today’s CTE students’ paths may lead them to four-year degrees, associate programs, professional certificates, or continuing education through employers. It is time for our nation to recognize that all of these paths have value.

Career and Technical Education can help individuals identify a career path and develop the knowledge and skills needed for employment both prior to entering the workforce and during employment as they seek advancement or career changes. Business recognizes Career and Technical Education as a necessary and important link to securing the qualified and motivated employees they need.

## WHAT CAN SOCIETY DO?

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High school and postsecondary CTE programs prepare students for multiple career paths equipping them with knowledge and skills relevant to the workplace. These programs are providing critical education opportunities for our youth and must be supported.

We must reevaluate the value of CTE programs and realize that they no longer include just the vocational education programs of old but encompass all careers for all disciplines. CTE programs are producing our future business leaders, engineers, IT professionals, designers, and a plethora of other professionals needed in order to ensure a strong functioning society. Our perceptions of CTE

programs need to change as CTE has changed. CTE programs are a critical part of any career path.

The definition of ‘college and career readiness’ must be reevaluated and expanded to include the multiple career paths and learning options that students have today. It must include a focus on employability and careers throughout a lifetime. This requires all of us to change our own perceptions – valuing those that are seeking skills through professional certifications as part of their career path as equally as those that are pursuing post-secondary degrees.

CTE programs recognize and affirm an individual’s unique skills and foster the pursuit of that talent in their career path. CTE programs are proven valuable stepping stones for all students.

*“The society which scorns excellence in plumbing as a humble activity and tolerates shoddiness in philosophy because it is an exalted activity will have neither good plumbing nor good philosophy: neither its pipes nor its theories will hold water.”*

*John W. Gardner, former President of the Carnegie Corporation and Secretary of Health, Education, and Welfare under President Lyndon Johnson*

## WHAT CAN BUSINESS LEADERS DO?

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Businesses need an educated, prepared, adaptable, and competitive workforce. In today's educational environment, students graduating from CTE programs not only fit that definition but are helping employers meet critical workforce needs. In addition, CTE provides a considerable return on investment. For instance, according to the state of Washington, for every dollar spent on secondary CTE students, federal and state governments will receive \$7 back in social security, Medicare, and federal and state taxes (Washington State Workforce Training and Education Coordinating Board, 2006).

Business must participate with local schools and workforce boards to reallocate resources to strengthen high school Career and Technology Education classes, career-based secondary programs, community colleges, and employer-sponsored apprenticeships.

Businesses also need to raise awareness about the value of CTE and advocate for this investment in their future employees. Employers should guide education on the skills they need to fill available and future positions and education needs to be open to this collaboration with business and industry.

It is with the following goals that the Industry Workforce Needs Coalition (IWNC) is being formed:

- Raise awareness of CTE programs and the value they provide in preparing our collective future workforce.
- Showcase how CTE is critical to solving the skills gap for all trades and professions.
- Model successful Business and Education partnerships that align education to business needs.

The founding partners of the IWNC include Caterpillar, Certiport, Cianbro, Newell Rubbermaid, Lockheed Martin, Festo, Home Builders Institute, Manpower, Penn Foster, Herzing University, Xerox, and Realityworks.

"We need to make sure America has a 21<sup>st</sup> Century workforce that is equipped with the training and capabilities necessary to be successful and competitive in the global marketplace," said CEO David Frederikson, D Mark group, Inc., a franchise of Manpower Group. "We need to have a national policy conversation about how to accelerate proven strategies that close local skill gaps with national funding."

"These companies clearly understand the value of CTE and want to ensure that the nation's policymakers continue to invest in these effective programs that are ensuring students are career, college and life ready," said Jan Bray, Executive Director of ACTE. "We know as the IWNC begins its critical work more high-level companies will join this effort."

"Working with education to ensure our future employees are properly skilled and prepared ensures that we will not incur another economic downturn as the current workforce retires," said Realityworks President Timmothy Boettcher. "CTE programs are critical in order to properly satisfy the talent needs of the business community while preparing our youth for a successful college, life, or career."

Lend your support to ensure a strong future for our country. Connect with your local high school to ask what you can do to help your local CTE programs thrive. Businesses interested in lending their guidance, support, and voice to the mission of maintaining these critical skill development programs for our future employees are asked to contact the IWNC at [contact@iwnc.org](mailto:contact@iwnc.org).

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