

CHALLENGES AND SOLUTIONS FOR THE NEXT PRESIDENT AND CONGRESS

COMPETING TO WIN

WORKFORCE IN FOCUS

WORKFORCE IN FOCUS

Today's Manufacturing Offers a Solid Pathway to Economic Success for a Modern Workforce

Introduction

The manufacturing sector in the United States continues to be one of the important bellwethers regarding the health of the U.S. economy. There are more than 12 million manufacturing workers in the United States, accounting for 9 percent of the workforce. Since the end of the Great Recession, manufacturers have hired more than 800,000 workers. According to a recent study by Accenture, authored in collaboration with the National Association of Manufacturers' (NAM) Manufacturing Institute, more than 50 percent of companies report plans to increase U.S.-based production by more than 5 percent in the next five years, with nearly a quarter of respondents planning to grow U.S.-based manufacturing roles by more than 10 percent in the next five years.¹

As U.S. manufacturing continues to regain strength, employers face increasing challenges finding high-quality talent to fill open positions. Another recent study by Deloitte and the Institute reveals nearly 3.5 million manufacturing jobs will need to be filled over the next decade. However, because of economic expansion and the large number of expected retirements, current projections forecast that nearly 2 million of those jobs will remain unfilled.² These shortages have considerable business implications and will hold back future economic growth. Increased production costs and revenue losses that result from skills shortages in U.S. manufacturing are costing manufacturers up to 11 percent of earnings annually.³

Furthermore, the skills needed to succeed in manufacturing are changing. Manufacturing requires a next generation of skilled workers to make products the world wants, from lifesaving medical technologies to internet-connected products found in our homes and cars. Yet, long-held industry stereotypes prevent many young people, and their parents, from considering manufacturing as an attractive career option. Business community leadership is required to overcome misconceived perceptions of a career in manufacturing, and more partnerships with educators and communities are needed to deliver practical training opportunities. Such efforts are most successful when initiated from the ground up. The nation succeeds when manufacturers are part of the solution.



¹ <http://www.themanufacturinginstitute.org/Research/Skills-and-Training-Study/~media/70965D0C4A944329894C96E0316DF336.ashx>

² <http://www.themanufacturinginstitute.org/~media/827DBC76533942679A15EF7067A704CD.ashx>

³ <http://www.themanufacturinginstitute.org/Research/Skills-and-Training-Study/~media/70965D0C4A944329894C96E0316DF336.ashx>

Three Big Trends Shaping America's Workforce

Trend 1: The Perception of Manufacturing Continues to Challenge Today's Job Candidates and High School Graduates

Job creation and economic growth continue to be top concerns for most Americans. However, the perception of manufacturing continues to be a challenge in attracting available job candidates. A study by Deloitte in partnership with the Institute found that Americans are cautiously optimistic about overall economic recovery, with 77 percent of Americans believing a strong manufacturing base should be a national priority and consider manufacturing among the most important domestic industry segments required to maintain a strong economy.⁴ Furthermore, when asked what industry is best poised to create 1,000 new jobs, Americans ranked manufacturing first, underscoring a resounding support for the manufacturing sector. However, only 37 percent of surveyed respondents indicated that they would encourage their children to pursue a manufacturing career, citing concerns over job security and stability as well as the perception of the industry.

Trend 2: Manufacturers Are More Actively Increasing Education and Industry Partnerships

Many companies are successfully partnering with local community colleges and high school career and technical programs to acquire formal training for existing talent and build a pipeline of future skilled workers. Manufacturing companies are collaborating with two- and four-year colleges and universities to review curriculum and provide ideas for revising them. Some companies are setting up open-access training programs to ensure that more people have the skills they need in specific geographic regions.

In addition, many manufacturers offer work-based learning and other types of apprenticeships that provide a structured and robust on-ramp to a successful career path in manufacturing. Potential employees look to these work-based opportunities to gain and improve skills as well as to achieve full-time employment.

Trend 3: Manufacturers Are Increasing Focus on Work-Based Learning Opportunities

Employers are a critical link in upskilling the manufacturing workforce to meet the current and future needs of advanced manufacturing. Manufacturers recognize that successful companies train workers, not only in their first year but throughout their careers. Effective “hands-on” learning programs are critical to helping students understand the knowledge behind technology and its applications. Access to programs that integrate rigorous curriculum and learning criteria with real-world scenarios are more important than ever. High-quality programs are defined by the incorporation of career development, work-based learning and on-the-job training, including internships and apprenticeship programs. When surveyed, 64 percent of high school students reported that their own interests and experiences influenced their career choices far more than the next greatest influence.⁵ Work-based learning provides ample opportunities for students to learn and discover new opportunities and navigate career choices.

America's Challenge: Manufacturers Face a Serious Shortage of Qualified Applicants for Skilled and Highly Skilled Production Positions

We must organize manufacturers to speak with one voice regarding the development of a workforce needed to sustain and grow manufacturing. Access to a properly educated and trained workforce is paramount.

The Challenge

Many employers engage in workforce development by focusing their resources on a specific need or position without looking to their local industry partners and local education systems, thereby neglecting the development of a long-term, robust pool of potential employees.

The Stakes

Due to baby-boomer retirements and the economic expansion, it is estimated that over the next decade, nearly 3.5 million manufacturing jobs will likely need to be filled, and the skills gap is expected to result in 2 million of those jobs going unfilled.⁶

The Solutions

While some employers have taken steps to work individually with local education and training institutions, the best and most sustaining efforts occur when manufacturers come together as a group to work with local or regional education systems to develop training to align interests and needs. Opportunities to gain access to the workforce should be easily understandable, accessible and responsive to the needs of both the business community and job seekers.

Manufacturers are inventorying existing programs and initiatives within their businesses and communities designed to deliver skilled workers. They are inventorying available skill-building and training resources and evaluating relationships to determine strengths and weaknesses in the talent pipeline. The key to more relevant education and training programs is an improved linkage between employers and education and training institutions.

⁴ <http://www.themanufacturinginstitute.org/~media/DD8C9A2E99B34E89B2438453755E60E8.ashx>

⁵ http://www.themanufacturinginstitute.org/~media/DD8C9A2E99B34E89B2438453755E60E8/2015_Public_Perception_of_Manufacturing.pdf

⁶ Deloitte analysis based on data from the U.S. Bureau of Labor Statistics and Gallup Survey.

Business and education partnerships must coordinate to:

- Provide current information on specific areas of educational emphasis necessary to meet the current and future manpower and knowledge needs of business and industry;
- Speak and operate in a unified manner to grow and sustain a globally competitive manufacturing workforce; and
- Utilize the NAM's guide for building a workforce-ready talent pipeline—“Overcoming the Manufacturing Skills Gap.”

Congress and the next administration must:

- Continue implementation of the Workforce Innovation and Opportunity Act of 2014; and
- Pass and enact the Carl D. Perkins Career and Technical Education Act in 2017 to improve career and technical education and open doors for the next generation of the manufacturing workforce.

We must better align key stakeholders, focusing on education and training programs that match workforce needs and make it a collaborative effort that builds momentum.

The Challenge

Manufacturing education and training programs face a major challenge: provide programs that are responsive to employers' needs, while at the same time offering programs that fit the definition of “completion”—often meaning a two-year, degree-bearing program. However, the programs that are most responsive to employers and often have the best employment outcomes for students are frequently the programs that provide industry certifications but do not require students to complete two years of education for a degree. Such certification programs found at career and community colleges face major disincentives to provide this type of training because they are not in line with accreditors' standards, and tuition dollars are lost when students forego more extended periods of schooling.

Many manufacturers understand that skills like critical thinking and problem solving not only allow an individual to process, analyze and communicate information but are also needed across a broad range of disciplines. Molding impressions that may influence career choices, including manufacturing, should begin at an early age. The pipeline to develop a manufacturing workforce begins in elementary school and should continue through high school. Across the country, manufacturers are partnering with educational institutions to influence curriculum and educate teachers to promote the value of manufacturing pathways. Manufacturers are also reaching out to parents to demonstrate that manufacturing is a viable option that provides long-term career prospects.

The Stakes

Executives noted that the greatest impacts their businesses face as a result of the skills shortage include their ability to meet customer demand, their ability to maintain or increase production levels and their ability to implement new technologies while achieving productivity targets. The resulting consequences are material. The inability to meet production levels hurts a company's growth and its earnings.⁷

The Solutions

Closer alignment of education and training programs to local or regional workforce demands are critical to ensuring students and workers are prepared for the challenges of a high-skilled, dynamic workplace. Federal, state and local education initiatives and programs should be coordinated and developed into a comprehensive learning continuum. The learning continuum must include input from the business community to help develop strategies, programs and curriculum that address skill and labor shortages and to help prepare students for careers in advanced manufacturing.

The NAM, in alignment with the Institute, has endorsed a series of industry-recognized credentials that clearly define the skills that are in demand by the manufacturing sector. This allows for educational institutions to have a more defined knowledge of the training necessary for success.

Business and education partnerships must align to:

- Assist in the extension and improvement of career and technical education programs;
- Promote the use of industry-recognized credentials awarded at the secondary and postsecondary levels; and
- Share programs, techniques, equipment and methodology developed in industrial training activities with educational institutions;
- Support efforts to better articulate credit transfers from high schools to community colleges and from community colleges to four-year institutions.

In addition, efforts should be made to judge the quality of programs and awards of federal financial aid dollars on the outcomes of students, such as earning an industry-recognized certification or credential or employment in the industry of study.

⁷ http://www.themanufacturinginstitute.org/~media/827DBC76533942679A15EF7067A704CD/2015_Skills_Gap_Report.pdf





We must build a system that delivers a sustainable and long-term pipeline of strong, mid-skilled manufacturing talent once they pass through our doors.

The Challenge

Career and employee development is just as important as attracting new talent to the manufacturing sector. A skilled labor workforce is a basic requirement for economic growth and prosperity. The new generation of workers who enter manufacturing careers are looking for access to lifelong learning and training programs that enable them to attain, maintain or upgrade skills to adapt to changing workforce needs.

The Stakes

Education and training do not stop once an individual graduates, completes a training or certification program or attains a job. Effective employee development, which includes training programs and education for all levels of personnel, means advancement for individuals and the manufacturing sector as a whole.

The Solutions

Publicly sponsored workforce training programs should be consolidated and coordinated into a comprehensive and adaptive system centered on the needs of a region and must be accountable for results. Public-private partnerships in education and training should be encouraged.

Additional solutions include:

- Basing employment and retraining efforts on future market demand for jobs and private-sector needs;
- Developing manufacturing employees through work-based learning, including apprenticeship, upskilling, credentialing and other types of training; and
- Supporting incentives for employees to undertake education and training programs of their own volition, often requiring their own time and resources to improve skills.

COMPETING TO WIN THE UNITED STATES WINS WHEN WE LEAD

Conclusion

The skills gap is a problem facing all facets of American manufacturing. Manufacturers across the country are working to fill the workforce pipeline through increased communication with local education partners and engagement in the workforce development system. Today manufacturers are playing an active role in reaching out to educators on how to better communicate the skills required for success in their companies. Federal policy should enable these efforts and embrace the robust efforts of manufacturers to train the future workforce.

For more information, contact:

Jay Timmons
President and CEO
(202) 637-3043
jay.w.timmons@nam.org

Aric Newhouse
Senior Vice President, Policy and
Government Relations
(202) 637-3040
anewhouse@nam.org

Robyn Boerstling
Vice President, Infrastructure, Innovation
and Human Resources Policy
(202) 637-3178
rboerstling@nam.org



Connect with Us:

