America's Most Wanted: Skilled Workers, Part 1

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Consider a manufacturing career amid media reports of shuttered factories, job losses and the worst economy since the Depression? Although certainly counter-intuitive, the answer to that question is a resounding yes! Despite the shaky economy, scores of American manufacturers are reporting a dire need for skilled labor.

Industry surveys reinforce this claim. According to the 2009 Manpower Talent Shortage survey, among the most difficult jobs to fill in North America are those of the skilled manual trades, with electricians, carpenters/joiners and welders as the most in-demand employees.

In addition, an October 2009 report, issued by the Manufacturing Institute, Deloitte and Oracle, cites that among companies involved in skilled production (whose employees are machinists, craft workers and technicians), 51 percent report shortages and see increased shortages ahead.

Although the United States has lost huge numbers of manufacturing jobs to countries like China, there still are well-paying job opportunities for skilled workers in the manufacturing sector here. As more and more baby boomers retire, the problem is only expected to accelerate.

The looming skilled-worker shortage is an unwelcome threat to the nation’s

manufacturing base that needs to be addressed at multiple levels, from better educating the next generation of factory workers to improving the public's image of plant work.

Manufacturing's Image Problem

There's no doubt that manufacturing has an image problem — especially among today's youth. A national poll of teenagers underscored in a major way teens' disinterest in manufacturing and working with their hands, and how the educational system ignored this arena as a viable career option.

The poll, sponsored by Nuts Bolts & Thingamajigs (NBT) and the Foundation of the Fabricators & Manufacturers Association (FMA), showed a majority of teens — 52 percent — have little or no interest in a manufacturing career and another 21 percent are ambivalent. When asked why, a whopping 61 percent said they seek a professional career, far surpassing other issues, such as pay (17 percent), career growth (15 percent) and physical work (14 percent).

A major reason that kids don't pursue careers in the skilled trades is the simple fact that they are not introduced to them anymore. In the past, high school students could take a shop class and get a feel for working with tools, but today most don't have that chance.

Also, factory conditions have changed dramatically — yet many of today's youth are unaware. The old stereotypes of back-breaking labor and grimy working conditions persist, yet it's far from the truth. Ask people today what they think of manufacturing, and most will probably recite a perception of a dirty, dangerous place that requires little thinking or skill from its workers, and offers minimal opportunity for personal growth or career advancement.

It's absolutely critical to change this mindset, and show young people how manufacturers have modernized, embraced new technologies and involved workers in management and product development.

A Nation of Non-Tinkerers

American adults, too, may be a root cause of disinterest among American youth to fill jobs in the industrial arena. Another NBT poll revealed that America has become a nation of "non-tinkerers," with 60 percent of adults avoiding major household repairs, opting to hire a handyman, enlist their spouse, ask a relative or contact a property manager. And, 57 percent state they have average or below-average skills at fixing things around the house.

This means young people essentially have no role models when it comes to repairing things themselves or taking pride in building something useful. It's no wonder why so many teens today dismiss the idea of considering a career in manufacturing, or one of the manual arts, such as electrical, plumbing, carpentry or welding.

Yet the survey also offers some hope that parents could influence their children to think about manufacturing work. The poll reveals that parents actually would support having a young factory worker in their family. More than half — 56 percent — would recommend their child pursue a career in manufacturing or another kind of industrial trade.

Knowing so many parents would back their children in this career path is truly welcome news. When America recovers from its economic downtown, it will be vital to inform the nation’s youth about available opportunities.

Manufacturing Opportunities Abound

The manufacturing environment is changing in terms of needs, opportunities and the talents required. Most of the fastest growing manufacturing jobs today require advanced knowledge and skills, but many in the available workforce lack these proficiencies and the educational background.

Technology is expanding exponentially throughout the industry — from design and production to inventory management, delivery and service. Manufacturing positions today include exciting work with lasers and robotics. Moreover, the introduction of CNC machine tools has changed the nature of the work of machinists. Now, a machinist has to be computer literate, and understand basic electronics and physics.

According to Laura Narvaiz, vice president of communications for the National Association of Manufacturers, “A lot of jobs require at least an associate degree or manufacturing certificate. Workers have to know how to program computers, fix computers and work with robotics.”

In addition to manufacturing demand, demographic factors contribute to the looming employment crisis. The average age of a worker in today’s skilled workforce is 56 years old. The baby boomer generation of skilled workers will retire within the next five to 15 years, creating the need for an estimated 10 million new workers by 2020.

Alan Burton, vice president for human resources at Maine-headquartered construction company Cianbro Corp., which employs millwrights, pipefitters, iron workers and electricians, says, “Generally, large manufacturers have a long-term workforce, but it’s an aging workforce. A large number of people are getting close to retirement and there aren’t enough new skilled workers to replace them.”

Increasing Interest in Manufacturing

Manufacturers, trade groups, educators and media must work to respond to this challenge. Industry associations are one group stepping up to the plate. In March of last year, for example, NBT partnered with the National Association for Community College Entrepreneurship (NACCE) to launch a national pilot program of summer manufacturing camps that builds on NBT’s successful camp blueprint.

In 2010, 16 NACCE member community colleges throughout the United States hosted NBT summer manufacturing camps targeting youth at the critical level of junior high and high school, exposing them to math, science and engineering principles, and industry technology, as well as basic entrepreneurship.

Camp participants use technology to create a product from start to finish, providing them practical manufacturing experience in 3D design, CNC programming, welding, machining and more, while learning product creation, problem solving, entrepreneurship and team building.

Visits to area manufacturers provide an up-close look at products being made, as well as career advice and inspiration from the entrepreneurs who run the companies. In addition to manufacturing technologies, camp participants also learn entrepreneurship principles, such as how products launch businesses and how small businesses are run.

NBT also issues scholarships to students at colleges and trade schools pursuing careers in manufacturing. In 2010, approximately 20 scholarships were awarded to students across the country.

Other organizations are working on improving the image of manufacturing as well. For example, the Weld-Ed National Center for Welding Education and Training offers summer camps, specifically for girls, focused on welding skills. And NAM is working to attract young people to manufacturing through its “Dream It. Do It” campaign. Programs like these could not exist without a need.

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