Is Manufacturing a Good Career Option for Young People?

Mike Collins, Author, Saving American Manufacturing

A study published by the National Association of Manufacturers and the Manufacturing Institute, titled “Keeping America Competitive”, states that “today’s manufacturing jobs are technology jobs, and employees at all levels must have the wider range of skills required to respond to the demands of an increasingly complex environment.” The study goes on to say that among companies involved in skilled production (whose employees are machinists, craft workers, and technicians), 51 percent report shortages and see increased shortages ahead. A U.S. Bureau of Labor Statistics report shows that shortages of skilled workers are most serious for machinists, craft workers, technicians, electricians, and engineers.

The Opportunities - The case for manufacturing jobs

1. **Demand:** The need to replace 10 million manufacturing workers in the U.S. certainly confirms that there will be many manufacturing jobs available in the next 15 years, and perhaps even more jobs if America can maintain its number one position and find a way to grow manufacturing.
2. **Clean High Technology Environment:** Many students, parents, and teachers still identify with the old vision of a manufacturing plant as a dirty, grimy, and dangerous working environment where workers do low skill and back breaking jobs. But this vision is far from the truth today. As manufacturing has continuously automated over the last 40 years, there are few low-skilled jobs left, and many of the modern plants look more like laboratories than manufacturing plants. Manufacturers need people who can operate, maintain, and troubleshoot their high tech equipment.
3. **White collar jobs:** Many young people think that manufacturing is only about blue collar jobs in the shop. This is not true, and many types of manufacturers have as many white collar jobs as blue collar jobs. There are design engineering, production control, purchasing, sales, marketing, and General Management jobs.
4. **Wages:** The average manufacturing job pays about $20,000 more per year then the average service job. Getting the skills needed to be craftsman or journeyman in manufacturing can really boost annual pay, as well. A good example is the high tech sector in Austin Texas where the average wage is $88,000 per year.

If there are so many job opportunities, why don’t we just announce the opportunity to parents, community colleges, universities, high schools, and grade schools? Then, get the industry and government to support a massive education and training initiative. Well, there are many problems and obstacles to consider:

The Problems

Manufacturing's Image

The single biggest problem is that American manufacturing has a bad image. Many students and citizens still see manufacturing as a world of dirty, dark, sweatshops offering long hours and low pay. Students use adjectives like boring, repetitious, and dangerous to describe their pre-conceived notion of manufacturing work.

A study sponsored by National Association of Manufactures (N.A.M.) and Deloitte Touche showed that manufacturing's image was "found to be heavily loaded with negative connotations and universally tied to the stereotype of the assembly line." It was also viewed by most people to be a dying industry that was quickly moving offshore.

Another 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)."

It will be a big challenge for American manufacturing to convince students seeking careers that they should invest in a manufacturing direction. The perception by high school and college students is that there seems to be no sense of loyalty from the manufacturing companies and very little security. This keeps students turned off to the career path.

Parents

Parents have not viewed working in a factory as an acceptable career goal for at least 30 years. Regardless of the emerging manufacturing job opportunities, most parents still want their kids to go to college and get a white-collar job. They still see college degrees as the key to getting their children a piece of the American Dream.

Teachers & Counselors

Many teachers and counselors also see manufacturing as a dead end career path. They hear reports on the news all the time about plant closures, layoffs, and outsourcing. Both teachers and counselors are in a position to recommend career paths at an early age, and most would not recommend manufacturing because of their perceptions.

Shop Classes

It is ironic that at the same time manufacturing needs skilled workers by the thousands, most shop or industrial arts classes have been shutdown and replaced by computer labs.

Vocational Training

The community college problem is that many of the vocational courses are not sufficiently financed, “as a result of community college funding formulas established by state legislatures that limit the number of technical non-credit courses, (only four states provide equal per-capita subsidies for all students).”

Advanced Technical Training

One of the biggest issues in trying to convince young people to make manufacturing a career is the advanced training needed for manufacturing workers in the 21st century. Nobody (including the government) can seem to agree on a definition of advanced training.

Because manufacturing plants are so automated and use such advanced equipment, the training needed is similar to the concept of apprentice training that leads to journeyman credentials. The Bureau of Apprenticeship and Training is a Federal department that keeps track of all registered apprentices. This program is supposed to assist private industry in developing and improving apprenticeships and other training programs designed to provide the skilled workers needed to compete in today’s global economy.

In 2008 the Bureau of Apprentice Training listed 397,375 apprentices as registered. The overall number of registered apprentices is not growing. Of this number they estimated that 75% of the apprentices are in construction; another 20% are in electrical, plumbing, brick layers, and other trades; and only about 5% of the registered apprentices are in manufacturing. This is a tiny number of apprentices out of 11 million workers, which indicates that most manufacturing companies are not investing in apprentice style training. It appears that most manufacturers have a different idea of what a skilled worker is, or they don’t want to make the investment.

Is a Manufacturing Career a Good Option?

Pundits describe many programs to try and interest young people in manufacturing like summer camps, plant tours, manufacturing games, etc, but to get young people interested in manufacturing will, in my opinion, take a lot more than promotions. It will require the following:

- **Government investment in vocational schools:** Manufacturers rate the community colleges as their preferred training providers. President Obama has asked the Congress for $8 billion to train community college students for high growth industries. The President said, “The Community Career Fund would train 2 million workers for jobs in potential growth areas.”
- **Apprentice type training with long OJT training:** The advanced training needed is a variation of the old apprentice program. This type of training takes several years of classroom education and several years of on the job training. The problem is that many manufacturers (particularly large

manufacturers) have been very reluctant to invest in this type of long term training.

- **Shop classes:** The best thing we can do to interest both grade school and high school students is reintroducing shop classes to schools. This will be a real challenge, because it appears that the schools are going to focus on STEM learning and probably won't have enough money for both programs.
- **Vocational class credits:** Just getting a degree in general subjects like history, psychology, business, etc. may not get someone a job. The last census showed that general degree graduates had entry level wages of $30-35,000 per year. We need an education system that is open to the idea of including career-oriented classes and skill training into the education curriculum. Theoretical knowledge combined with practical training in manufacturing systems is needed. Yes, I mean giving people credit for skill training no matter what degree they are pursuing. This could help students with college degrees get a white collar job in manufacturing and help manufacturers replace retiring skilled workers.
- **Money and Wages:** Students are very aware of vocations that pay well such as an electrician, plumber, or nurse. It will probably take higher entry level wages to attract the good students who have credentials in advanced math and science. If they are recruited into an advanced technical training program, it will probably also be necessary to pay them as they go through the training for the skills acquired and award them with industry certifications for their transferable skills. Since the large manufacturers have been focused on lowering labor costs and getting rid of unions for the last 30 years, paying more to get the right people will test their resolve.
- **Career:** To recruit the necessary people, manufacturing really needs to describe the opportunity as a career – not just another job. I think this will take a longer term commitment to job security for the recruits. It may also require offering internships and scholarships to help pay for their education and training.

Young people need to know, both historically and moving forward, that a career in manufacturing has great potential — including the opportunity to eventually own and operate their own business — that comes with a career in the skilled trades. The big issue is not promoting this career to young people, it is about money and investment. I am not very optimistic that many of the suggestions I have described will be acceptable to manufacturers or the government, but perhaps we will simply have to get deeper into the skilled worker crisis before these kinds of suggestions will be considered.

Mike Collins is the author of "Saving American Manufacturing" and its companion book, the "Growth Planning Handbook for Manufacturers." To learn more about the author or these titles, visit http://www.mpcmgt.com/ [1].

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