

Mobile Outreach to School Kids

BY LARRY A. MAIER

The nation is now facing a critical shortage of skilled labor.

This problem covers the entire pipeline from highly skilled machinists who can operate the high technology equipment used in today's manufacturing facilities through degreed scientists and engineers.

According to a survey of local precision manufacturers conducted by the Western Massachusetts chapter of the National Tooling and Machining Association (WMNTMA), there are more than 400 openings in phone area code 413 right now. An aging workforce will add 200 to 300 per year, even if the economy is flat.

According to a Northeastern University Study, there will be more than 100,000 manufacturing job openings in Massachusetts over the next decade.

Currently, companies in Western Massachusetts are turning away work due to an inability to find qualified employees.

There are a number of factors contributing to these sobering statistics, among them being the ongoing challenge of convincing young people and their parents that manufacturing, specifically precision manufacturing, is alive, well, and has a bright future. Another challenge is to simply inspire young people to want to join the sector. This can best be done by showing and telling them what it is all about.

One of the most effective vehicles — literally and figuratively — for handling these assignments in Western Massachusetts has been a mobile training unit (MTU) operated by the Massachusetts Manufacturing Extension Partnership (MassMEP).

When members of the WMNTMA visit middle schools and high schools, the comment heard all too often from the "worker of the future" is "I thought manufacturing was dead."

If those of us in industry do not change this perception, it will be.

We continually hear about layoffs and shutdowns. This is the information on which today's parents and children base their career decisions. The focus is on

unemployment, not openings. According to reports issued by the Massachusetts Department of Labor, there was approximately one unfilled job for every two unemployed people in the state as of December 2007. Roughly 7 percent of the unfilled jobs were in manufacturing.

Meanwhile, 100 percent of graduates from manufacturing technology programs at local vocational high schools have jobs, go into the military, or go to college upon graduation. Neither our elected officials nor our educators preach this message.

Gov. Deval Patrick and top educators in Massachusetts have identified the need to improve interest and performance in grades K-12 relative to STEM (Science, Technology, Engineering and Math) education.

Today's high technology manufacturing world is the broadest, purest application of STEM. At Peerless Precision Inc., in Westfield, Mass., we use metrology, physics, chemistry, computers, robotics, engineering, algebra, trigonometry, and geometry every day. The future of manufacturing is not about cheap labor. It is about using all of the STEM disciplines to improve productivity and develop new technologies. We need to include application into education.

The WMNTMA and the Regional Employment Board of Hampden County borrowed a mobile training unit in an effort to reach out to local middle school students.

This vehicle had 12 computers, a mini-mill, and a mini-lathe. It was in use by MassMEP to train unemployed people in the Northeast to be machine operators.

Four Springfield, Mass., public schools agreed to try out the MTU. The result was that 320 eighth-graders participated in 45 minute educational seminars where they learned how STEM is used in the real world.

Each student was presented with career information and informed of the educational requirements that are needed in today's high technology, precision manufacturing environment.

This was followed by tours of EASTEC by 140 students from six middle schools

with funding obtained from the Society of Manufacturing Engineers.

The successful program was expanded in the fall of 2007 when the MTU toured 13 area middle schools. Almost 1,000 eighth graders participated in this stem career awareness program which was followed by "Middle School Precision Machining Career Awareness Day" which teamed each of the schools with a local precision machine shop. Almost 200 students who had expressed interest in manufacturing after the seminars were given tours of local high-tech manufacturing facilities. They saw the clean, well-lit, technology-driven companies that represent the industry as it is today.

In October 2008, this program will be expanded to more than 2,000 middle school students in Western and Central Massachusetts.

Clem Fucci, chair of the Manufacturing Technology Department at Westfield Vocational Technical High School, commented: "I cannot stress enough what impact that bus has had with helping to recruit young people into pursuing a precision manufacturing and engineering career."

Based on the success of this outreach program, a group of industry leaders in Western Massachusetts are proposing a new, expanded vision and mission for the Mobile Training Unit.

This program would be a perfect model for outreach to grades six through eight throughout the state and the nation. And to make things "real," demos would be followed by tours of high technology manufacturing facilities near the schools.

We know the program works based on the sample of 1,300 students who have participated thus far. We need to build on this successful, tested model. And we need to find funds, whether in the private or public sector, to make this happen.

Larry A. Maier is president of Peerless Precision Inc. He can be contacted at LMAIER@PEERLESSPRECISION.COM

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