

## High School Confidential: Manufacturing is Cool

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The 2015 ManpowerGroup annual Talent Shortage Survey reveals that 32% or 1 in 3 of "U.S. employers report difficulties filling job vacancies due to talent shortages," down 8% from 40% in 2014. This 10th survey shows that "skilled trades remain the hardest to fill for six consecutive years." Among U.S. employers, 48% acknowledge that talent shortages have a medium to high impact on their business, but few are putting talent strategies in place to address the problem... despite the negative impact on their business."

One reason for the shortage is that public misperceptions of advanced manufacturing has led young people entering the workforce to choose other career paths. In an article titled, "What the shortage in skilled manufacturing workers means to a hungry industry" of the e-newsletter Smart Business, Kika Young, human resources director at Forest City Gear Co. Inc. of Rockford, Ill., said "Most people in Gen Y out of high school don't think of manufacturing as a career or as a good option. They don't think of it as glamorous; they think of it as dark and dingy and dirty and aren't interested in going into that."

If we want to attract today's youth to manufacturing careers, we need to change their perceptions about what the manufacturing industry is like and show them what great career opportunities exist in the industry. We need to expose them to the variety of career opportunities in manufacturing and help them realize that manufacturing careers pay 25% to 50% higher than non-manufacturing jobs, so they will choose to be part of modern manufacturing. The spotlight needs to be on the high-tech environment of modern manufacturing. New technologies such as 3D printing, robotics, and advanced analytics underscore the reality that a career in manufacturing does not entail working in a dirty, dangerous place that requires no skills.

SME Education Foundation (SME-EF) is working to change the image of manufacturing and prepare youth for careers in advanced manufacturing through its Partnership Response In Manufacturing Education (PRIME) initiative.

PRIME is a collaborative model that engages regional manufacturers, local schools and other community representatives to establish a tailored advanced manufacturing / STEM education that provides high school students with relevant, hands-on knowledge and skills. PRIME gives manufacturers a voice in education, builds student awareness of manufacturing career pathways and provides youth with 21<sup>st</sup> century manufacturing skills, which can lead to industry credentials. Students graduating from the PRIME program are often capable of successfully transitioning to the manufacturing workforce immediately upon high school graduation.

More on the New Workforce

[Detroit vs. the West Coast: Fetching Top Talent](#)

### Parents Still Not Getting the Message About Manufacturing

Established in 2011, PRIME has grown to 36 schools in 21 states, impacting more than 6,500 students annually with 70% of graduating PRIME seniors pursuing a postsecondary education in manufacturing or engineering. SME-EF has also supported 144 PRIME students with nearly \$400,000 in scholarship awards.

In my home state of California, there are six PRIME schools: Esperanza High School, Hawthorne High School, John Glenn High School, Petaluma High School, Rocklin High School, and San Pasqual High School.

SME-EF is working to expand its network by working with corporate partners to sponsor the development of new PRIME sites at high schools throughout the country. “PRIME is forging a path to revitalize manufacturing education and fostering the development of a highly skilled, STEM-capable workforce,” said Brian Glowiak, director of the SME Education Foundation. “Through the support of visionary corporate partners, like Alcoa and Honda, we are helping to create the next generation of manufacturing engineers and technologists and championing one of the most critical elements for innovation success.”

SME-EF and PRIME provide a winning solution for students by offering them opportunities to:

- Collaborate with local SME Chapters and industry partners to co-host events
- Engage with other students and educators in the PRIME network to share their experiences and creative lesson plans as well as participate in student competitions
- Participate in Advanced Manufacturing/STEM camps with younger students and other extracurricular activities
- Receive post-secondary educational scholarships
- Engage with SME members who can share their technical knowledge and experience by mentoring PRIME students, offering internships and providing job-shadowing opportunities.
- Attend student summits at SME’s national manufacturing events. These summits allow students, parents and educators to interact face-to-face with representatives of companies that provide revolutionary technologies and business-changing innovations.
- Implement training materials and curriculum from Tooling U-SME, the industry leader in manufacturing learning and development.
- Receive SME’s Advanced Manufacturing Media, which produces digital and print publications that cover relevant manufacturing news, technology and advances.

### **PRIME Success Story**

In 2014, Denbigh Aviation Academy in Newport News, Va., was selected for PRIME designation through the SME Education Foundation. Students at the Aviation Academy, are building a full-sized, 750-pound, two-seat aircraft. At the culmination of the project, they are planning to take this student-built aircraft to the skies! The Aviation Academy is a four-year, high school program in Newport News Public Schools, located behind the Newport News-Williamsburg International Airport. Learners focus on careers in aviation, electronics, engineering and technology. “We are able to get real world experience and it ties in with aerospace manufacturing /engineering. It’s a good thing because the fields are lucrative and growing,” says Laura Prox, a junior at the Denbigh Aviation Academy.

As one of the first sites on the East Coast to partner with Eagle's Nest Projects (an organization that donates the plane kits to schools to build these aircrafts), students can immerse themselves in the manufacturing and aviation sector. An elite team of 30 students have completed the fuselage and tail sections. These students demonstrate an authentic example of manufacturing brought to life in the classroom. Students are assigned roles from management to labor based upon their coursework and experience. They are learning and employing fastening systems and procedures that can be found at any aviation assembly facility. Using the materials, reading the blueprints and drawings, and understanding principles in assembly outline some of the talents students gain. Throughout the process, some of the "soft skills" also emerge such as teamwork, communication and problem solving.

Manufacturing Day 2015 will occur on Friday, Oct. 2, and throughout the month of October, SME will be supporting Manufacturing Day through chapter activities and events, the SME Education Foundation's PRIME school network and Tooling U-SME. Here's what PRIME schools are doing for **Manufacturing Day!**

PRIME exposes our youth to the modern manufacturing environment and changes the image of manufacturing to one that is "cool" and full of exciting career opportunities for our youth. This will enable us to recruit the next generation of manufacturing workers to fill the skilled worker positions now going unfilled.

The question is: Will you be the corporate executive who joins the PRIME program to sponsor more schools to expand the program to hundreds of schools in all 50 states? If so, go to this [link](#). Or, will you be the corporate executive that will have to admit to his children or grandchildren that you are partly responsible for reducing their career opportunities for good paying jobs in manufacturing because you offshored manufacturing and/or imported foreign workers to replace American workers at your U.S. plant?

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