

## ToolingU-SME Works to Close the Skills Gap

The Deloitte and The Manufacturing Institute [2022 Manufacturing Perception Study](#) reports that “significantly more respondents believe that manufacturing jobs are innovative and more respondents are likely to encourage their child to pursue a career in the industry” [compared to the 2017 study]...”Further, the pandemic has led to a new awareness of the critical nature of manufacturing in the United States and beyond.”

This corroborates the [eBook](#) released last year by American Machinist and IndustryWeek titled, “Closing the Skills Gap – How manufacturers are leveraging new technologies and energizing a new generation to finally close the labor gap,” that was sponsored by Epicor Software Corporation.

The Executive Summary stated: “We are on the cusp of a full-scale digital revolution in the manufacturing industry...[and] on the cusp of an enormous wave of retirements as Baby Boomers exit the job market...we have a perfect storm.” The result could be that the “500,000 unfilled manufacturing jobs today...[could] balloon to 2.5 million over the next decade.”

The eBook outlined the application of the new tactics that manufacturers are applying across industries: “Over the last few years, manufacturers across the industry have begun systematically attacking the skills gap head-on...”

However, now is the time to be prepared to take advantage of the increased interest in returning manufacturing to America and strengthen our manufacturing base as a result of the weaknesses in the domestic supply chain revealed by the COVID-19 pandemic.

Since 1979, the [SME Education Foundation](#) has been inspiring, preparing and supporting the next generation of manufacturing and engineering talent through their Student Summit event series, the SME PRIME® (Partnership Response In Manufacturing Education) initiative, and Student Scholarship program. The Foundation “works directly with the manufacturing community to educate the next-generation workforce through SME PRIME. The partnership provides industry-driven and learner-centered curriculum to high school students at SME PRIME schools across the country. Online learning is a significant component to the tailored curriculum developed for each SME PRIME school.”

I had the pleasure of being connected to Chad Schron, who is the senior director for [Tooling U-SME](#) and the Co-founder of Tooling U. I learned that Chad grew up in manufacturing. He started his career working in his grandfather’s machine shop and attended his first [IMTS](#) show before he graduated from high school. Chad developed the idea for an online manufacturing training school while working at the shop to combat the manufacturing skills shortage.

I told Chad that I started working as an engineering secretary at age 18 for a small defense contractor that was essentially a machine shop making components such as accelerometers, rate gyros, potentiometers before going to college later.

Chad told me that ToolingU-SME has developed curricula that “one in five community colleges and over half of the Fortune 500 manufacturing companies use to train their workforce and their students.” He added, “During COVID we saw significant growth in our education business as schools needed online programs because students were participating online for virtual classes at home.”

On the SME website, I saw that some of the industry-leading companies that work with Tooling-U are: Aerojet General Corporation, B/E Aerospace, BMW Manufacturing Co, Caterpillar, Chrysler Group, Deere & Company, General Dynamics, General Electric Company, Harley-Davidson, Mazak Corporation, Medtronic, Meggitt Aircraft, Raytheon, Senior Aerospace, Siemens, and United Technologies Corporation.

The website states, “Tooling U-SME's industry-leading online classes and assessments are developed with input from manufacturers and employ the latest methods in instructional design. “Turnkey Training is a series of predefined online curriculum packages for core manufacturing job roles” that combines classes for targeted learning with on-the-job training (OJT). “Turnkey Training quickly creates a learning road map and career path for everyone from new hires to tenured employees. Most job roles can be completed in one year with less than four hours a month spent online.”

In addition, “Turnkey Training is ready for immediate use and delivers instruction in the areas needed most by today's manufacturers. Unlike many other training programs, Turnkey Training requires minimal preparation. It is efficient, effective training that will deliver ROI quickly.”

I asked Chad about the impact of the COVID pandemic, and he said, “COVID impacted a lot of our onsite Instructor led training programs as companies did not allow for in person/onsite training. Most customers have significantly reduced or removed all of their COVID restrictions, and we are back to pre-COVID training programs.”

Chad told me that the COVID pandemic had no real effect on their Apprenticeship and Certification programs. The SME website describes Tooling U-SME's Apprenticeship Frameworks as “a series of predefined curriculum for common apprenticeship job functions, that provide related training instruction (RTI) using Tooling U-SME online classes...that support common apprenticeship job functions, and provide a flexible model allowing organizations and educators to offer easily accessible solutions in alignment with business needs.”

He explained, “By pairing Tooling U-SME online classes with on-the-job training, trainees can complete their apprenticeships at their own pace from anywhere. Our online classes also provide trainees with the education and theory to help them increase their success. Our Apprenticeship Frameworks are aligned with nationally recognized Department of Labor apprenticeship programs and easily incorporated into a company’s existing programs or used as a foundation for a new apprenticeship program.”

Chad said that ToolingU-SME also offers Certification programs that “are built by professionals within the manufacturing industry who guide the development and continuous improvement of the bodies of knowledge and competency models upon which the certifications are based.” Current Certification programs listed on the website are:

- Certified Manufacturing Associate
- Certified Manufacturing Technologist
- Certified Manufacturing Engineer
- Lean Certification (Bronze, Silver and Gold)
- Additive Manufacturing
- Electrical Electronics Technology

Chad said, “We are seeing significant growth in our Industry 4.0 curricula as more companies are adopting SMART/Industry 4.0 technologies. This is particularly important as more companies are reshoring and changing their supply chains. They are leveraging these new technologies.”

Chad added, “We have a new Virtual Reality product that we just launched, and there is a video overview to view at <https://www.youtube.com/watch?v=g-2MhC3beBY&t=10s> and press release to read at <https://www.toolingu.com/About/Press-News/Tooling-U-SME-Debuts-Immersive-Virtual-Labs>.

He concluded saying, “ToolingU is constantly adding new and updated classes to our online catalog and our upcoming class release schedule can be viewed [here](#).”

I told Chad that the training ToolingU-SME provides is crucial to achieving one of the goals of [Industry Reimagined 2030](#); that is, adding 5 million to the manufacturing-related, middle-income workforce by 2030 (a 40% increase.) I told him that I hoped that the ToolingU curricula will expand to being used by four out of five community colleges instead of one out of five to accelerate that rate of training for manufacturing jobs in the U.S. to fill the over 500,000 manufacturing jobs currently open and prevent us from having an unfilled gap of over two million by 2030.