



Technology

Skills Gap: Why You Need to Develop a Multigenerational Workforce

Kip Hanson | Aug 03, 2021

With the manufacturing workforce aging, companies must find innovative ways to tackle a growing skills shortage if they want to thrive in the years ahead. Here are some steps you can take to develop a multigenerational workforce.

Bob's been managing the finishing department for nearly three decades. His retirement party is next week.

Jeannine retired two months ago. She started working in the assembly area right after high school and the supervisor has yet to find someone with her skill level.

Leticia is the company's top welder, Mary is the best CNC setup person, and Ricardo keeps second shift running like a top. The problem? They're all baby boomers and they're all set to retire within the next decade. Now what?

Scenarios like this are playing out in manufacturing companies across the United States. In fact, the *National Association of Manufacturers* reports that roughly one-fourth of the country's 12.3 million manufacturing workers are 55 years of age or older, people whose departure from the workforce will only exacerbate an already difficult skilled labor shortage.

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Adam Beckerman
Aprio LLP

It's nothing new. In the 2015 "Preparing for an Aging Workforce: Manufacturing Industry Report" by the *Society for Human Resource Management* (SHRM), experts were suggesting much the same thing. Their predictions, it seems, were accurate. Considering that manufacturing accounts for roughly 11 percent of the \$21.4 trillion U.S. GDP, the situation could have dire consequences for our economy and future competitiveness. Again, now what?

Communicating the Benefits of Skilled Trades

Adam Beckerman has a few ideas. The partner-in-charge of the Manufacturing and Distribution Group at Aprio LLP, an Atlanta-based CPA and professional advisory company, he noted that at least part of the problem stems from discussions at American dinner tables.

Professional Learning Opportunities for Manufacturers

In any discussion over the ongoing labor shortage and pending retirement of several million manufacturing workers, there's one crucial thing to keep in mind: For anyone willing to learn a trade, there's no shortage of educational resources, and many of them are online:

- SME has developed its *Tooling U-SME* program, covering everything from machining and sheet metal fabrication to composites processing and smart manufacturing.
- *Miller Welds* and *Lincoln Electric* offer extensive online welding training, much of it geared toward certification.
- Machine tool builders such as *Haas Automation* provide customers with in-house and virtual CNC training, as does FANUC on its *robots* and *CNC equipment*.
- The *American Society for Quality* (ASQ) offers hundreds of e-learning and face-to-face courses.
- There are also countless *vocational-technical* schools and community colleges, as well as programs like *Workshops for Warriors* (for military veterans).

The list goes on.

Perhaps the biggest roadblock to these educational resources is paying for them. For those fresh out of high school or who have served in the military, grants and other financial aid opportunities are available.

And for those who are already working but looking to add new skills, it behooves employers to lend them a helping hand in terms of time away from work and tuition reimbursement.

Employers can also collaborate with suppliers and area schools to sponsor "lunch and learn" events. These and other educational resources serve to make employers and employees alike more efficient, profitable and engaged.

"There's still a misconception out there that factory floors are dark, dirty places, so very few parents tell their kids to pursue a career in the trades," he says. "That, and the schools have largely eliminated shop class from their curriculums, so there's little chance of students being exposed to manufacturing."

As many of the people reading this already know, the "manufacturing is dirty" trope is largely false. Manufacturing has become very high-tech, Beckerman notes, and it requires talented, well-educated people to program and operate the equipment used in this dynamic, well-paying field.

Development of these people, however, needs to begin at an early age. High schools and even middle schools must be proactive about introducing students to manufacturing in order to achieve a true multigenerational workforce. The federal government should be more supportive of vocational training and, perhaps most importantly, society must eliminate the stigma that accompanies non-college career choices.

Read more: Manufacturing Guide: How to Become a CNC Machinist

The 12 for Life Program

Manufacturers can and should take their own actions as well.

Beckerman points to the Southwire Company, one of North America's largest wire and cable producers, as a shining example of what's possible when manufacturers take the skilled labor shortage into their own hands.

In 2007, the company began working with the Carroll County school district to improve district's high school graduation rates. Since a diploma or GED is required to work at Southwire, this would not only increase the pool of available workers but also help the community overall. The 12 for Life program was born.

Students enrolled in the program attend school while simultaneously participating in an internship at one of Southwire's manufacturing facilities, notes Beckerman, adding that the graduation rate throughout the district went from 64 percent to better than 90 percent. Since then, other companies have adopted the program, including Textron Specialized Vehicles in Alabama.

"Granted, these are large manufacturers with the financial resources needed to address the problem, but there's no reason why smaller companies can't collaborate with one another and get their local school districts to adopt similar strategies," Beckerman says.

Read more: The CNC Machining Skills Gap: A Q&A with Tony Schmitz on Training Tomorrow's Workforce

Accessing Decades of Knowledge

Of course, these are long-term goals, and any potential machinists, welders, sheet metal fabricators and other industrial workers delivered from these efforts are still years away from gainful employment. The more immediate question is: What steps should manufacturers take now to attract, train and retain young talent, and to harvest and share the decades of knowledge locked up in older employees' brains?

One way shops can tackle both of these objectives is through the development of mentorship programs.

"You have to make sure that older employees feel like they're still part of the team," Beckerman notes. "That begins with giving them the opportunity to share their years of knowledge with an apprentice or group of apprentices. At the same time, the younger people can help educate their mentors on newer technologies with which the baby boomer generation might be unfamiliar. The learning goes both ways, and taking this approach creates a culture of togetherness that is otherwise difficult to achieve."

Continual improvement projects such as these require structure, Beckerman warns. He recommends documenting the learning process and setting KPIs (key performance indicators) to measure progress. Management must also adjust work schedules to give students and mentors the time needed for

information sharing.

“I’ve even heard of companies videotaping their older employees while performing tasks or explaining a process, to make sure the nuts and bolts of factory work can be carried forward to the younger generation,” he adds.

Read more: Skills Gap Analysis How-To: 5 Steps for Examining Your Training and Hiring Requirements

Industry 4.0-Driven Factories of Tomorrow

Multigenerational workforces are an asset to any manufacturing company, but it’s imperative to note that the industry is evolving.

Many of today’s welders and machinists will one day become skilled robot tenders and programmers, responsible for keeping entire fleets of droids operational.

Manual tasks such as deburring, parts washing, packaging and forklift driving will gradually become completely automated, eliminating these low-paying, often boring jobs. And the Industrial Internet of Things (IIoT) will provide managers and factory owners the real-time manufacturing data that once resided solely within the heads of their most skilled employees.

The result? Humans will have opportunities to assume more challenging, value-added roles that robots cannot perform. Tribal knowledge will become a relic of the past, and manufacturing will become the highly technical, data-driven endeavor it should be. AR/VR and other forms of simulation will help to maximize equipment efficiency and personnel training alike. These and other future-state factors must be considered when implementing any mentorship strategy—and when hiring workers—as the production floors of yesteryear evolve into the Industry 4.0-driven factories of tomorrow.

What steps are you taking to strengthen the knowledge transfer between generations in your workforce? Share your thoughts in the comments below.