

Manufacturing Skills Gap Taking Toll On Industry

With a lack of qualified workers facing manufacturers, educational partnerships and outreach programs offer ways to close the gap.

DESPITE A 7.6 PERCENT unemployment rate, manufacturing industries are facing a shortage of approximately 600,000 workers nationwide, according to a Deloitte Development, LLC survey. Although confectionery and sugar-using businesses only employ about 0.3 percent of all manufacturing workers, it is no exception to the skills gap.

The average age of a skilled manufacturing worker is 56 years old, according to the U.S. Department of Labor. This aging pool of production employees combined with rapidly changing technology, a lack of education and a seemingly negative perception of manufacturing careers contribute to the decline in the number of qualified workers, which presents a unique set of issues for confectionery manufacturers.

Since the confectionery business is saturated with small, family-owned companies, many do not have the resources to offer benefits sought by skilled workers or the necessary recruiting tactics to attract them, and the need for skilled labor is exacerbated during seasonal upswings. Further, not only do manufacturing workers in confectionery plants need to have basic machining skills, but they must also be knowledgeable about food quality and safety and they are required to perform a variety of duties from cooking and panning to packaging and troubleshooting. "How do you learn to run a taffy wrapper? How do you learn to cook caramel?" The Warrell Corp. President and COO Pat Huffman muses. "On-the-job training is all we have. There is no vocational-technical training for candy line workers."

While solutions to the skills gap are in the early stages, by taking a local approach and partnering with community colleges, vocational schools and other employers, some companies are alleviating the shortage of production workers that 82 percent of manufacturers say they face, Deloitte finds.

EXAMINING THE ROOTS OF THE GAP

The candy sector has some very particular needs, but the overall problem stems from more than five million U.S. manufacturing jobs moving overseas or being lost



between 2000 and 2010. As a result, less than 10 percent of the workforce is currently employed in manufacturing, down from 30 percent in 1960 and 14 percent in 2000, according to the Department of Labor.

However, the manufacturing sector is on the upswing, as jobs have grown 4.3 percent since 2010, the Society for Human Resource Management finds, and 93 percent of factory managers agree manufacturing in North America will be increasingly important to their company's future operations, a Manpower, Inc. survey shows.

The reasons for the decline in interest in production jobs and the skills to participate run the gamut; however, many agree inadequate preparation for technical careers is to blame.

"We're not turning people out of high school with the same skills they used to have," Keith Campbell, a manufacturing technology consultant and project manager for the Mid-Atlantic Mechatronics Advisory Council says. "Nowadays people don't know how to use a ruler, they're not even familiar with hand tools, and they can't work in teams or communicate effectively. There are a ton of issues, whereas when I went to school, everyone took shop in junior high and you had to learn those skills."

Campbell should know: He spent nearly 30 years at The Hershey Co. working in technical and managerial positions at the corporate and plant levels. Having

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Mid-Atlantic Mechatronics Advisory Council

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observed a decline in the number of qualified manufacturing workers throughout his career, Campbell has spent the past eight years preparing and certifying curriculum and competency models related to mechatronics and industrial maintenance.

"There are these conventional silo trades such as mechanics and electricians, but we need multi-skilled techs. You can't send five people with different specialties out to troubleshoot one machine. The need to migrate from the conventional trade model to a multi-skilled model is very important," Campbell says.

Rob Nelson, president and CEO of Elmer Candy Corp., says fundamental leadership and accountability skills are among the most desirable characteristics an applicant can have: "It's a challenge because we are so seasonal, we have to rebuild our workforce every year. In our industry, food safety, quality and our reputation are everything, so you have to identify people who care and want to do the right thing. The goal is to have an engaged workforce."

Vice-President of Adams & Brooks, Inc. Cindy Brooks expresses a similar discontent: "Sometimes experience alone is not enough, but the ability to think on your feet in a logical, methodical manner can mean the difference in the ability to get the job done."

Although the country's emphasis on higher education might result in a stronger workforce in fields such as marketing and food science, sources report students who enter manufacturing upon graduating college often harbor unrealistic expectations. Further, among parents, the college education obsession combined with the notion that the manufacturing industry is on the decline, is fostering negative perceptions of trade careers.

"Our educational system has become so ingrown, people in education don't know anything but school," Campbell says. "And we have this incorrect perception among parents about what manufacturing is and how many jobs there are in America."

Speaking at the *IndustryWeek* Best Plants conference, President and Chairman of Michelin North America Pete Selleck pointed to a curriculum development program in South Carolina in which students ranked manufacturing 14th among 16 career choices. "Very few students in school aspire to work in manufacturing," he said.

For college-educated students whose career paths do lead to manufacturing, Warrell's Human Resources Manager Susan Tandle says they often lack perspective. "Higher education is developing a false sense of hope because the people graduating today have higher expectations for salary," she says. "There's just not a connection between salary expectations and the real world."

Loyalty is another quality today's applicants lack, sources claim. Warrell Plant Manager Richard Burton explains: "The average individual coming through the workforce 25 years ago would have three to four jobs throughout their entire working life; now the typical 53-year-old male would have 11 jobs on average. It reflects a striking change in loyalty."

A product of this phenomenon himself, Burton says he's been forced to migrate from plant to plant throughout his career as a result of closures and reorganizations.

Tandle notes the impact benefit cutbacks are having on employee retention: "As jobs have gone overseas, margins have increased and companies are cutting back on benefits, service awards, you name it. A lot of perks that help drive loyalty have a cost and those are the kinds of things that go away first. Thirty years ago you couldn't find a company that didn't have a pension program."

Among those who have made lifelong careers in manufacturing, many are nearing retirement — 2.7 million U.S. manufacturing workers are aged 55 and older and are likely to leave the labor force within the next 10 years, according to Deloitte.

The Boston Consulting Group reports that if manufacturing continues to expand and baby boomers retire at their current rates, the shortage of highly skilled manufacturing workers could reach 875,000.

PROGRAMS HELP CLOSE THE GAP

Specifically looking to help the candy business, the NCA Confectionery Foundation was established in 2011 and the board agreed its first objective would be to focus on alleviating the skills gap. The group has since been developing programs to attract a younger generation to confectionery, Foundation Chair Sara Clair, of Brown & Haley, tells the **NCA Journal**.

"Successfully working with chocolate and other ingredients in confectionery manufacturing depends upon science, training, experience and art. As baby boomers retire, they take with them knowledge built upon a lifetime of work and decision-making," Clair says.

"The Confectionery Foundation board strongly believes that now is the time to actively elevate awareness of careers in our industry," she says, adding: "We are working both at the Sweets & Snacks Expo and at schools near our factories to develop programs that engage students in the possibilities of confectionery manufacturing careers."

The Foundation targets vocational-technical high

school students and culinary trainees. Since these two groups already know they want to enter skilled trades the Foundation hopes they will make applicants who are motivated to problem-solve, understand the need for quality and safety, and have a genuine interest in the products they help produce, Clair says.

However, according to Greg Forte, dean of Hospitality Management at Cuyahoga Community College, even culinary students who aspire to work in confectionery are few and far between, as only about 10 percent of graduates in the program join candy companies.

Yvette Thomas, administrative director at the Pennsylvania Manufacturing Confectioners' Association (PMCA), explains this might not result from a lack of interest, but rather a lack of awareness: "People don't understand what types of jobs are available and what is done in the industry, and some don't think it's as highly paid. The industry isn't as big as some of the other food areas, and it's a very close-knit community, so all those things are adding to the lack of awareness."

The Confectionery Foundation uses the Sweets & Snacks Expo to introduce the industry to culinary students, many of whom opt for more obvious careers at restaurants, as personal chefs or working for big-name food companies, sources claim.

But this year more than 100 students from nine Chicago-area culinary schools toured the 2013 Expo and attended keynote sessions and special presentations on confectionery careers as part of the Foundation's educational outreach initiative.

"Students really had not considered confectionery manufacturing before they went through our program," Clair says. "When applying for a job at a restaurant, it's a lot more approachable because applicants can see a restaurant or a bakery, they can walk in and find out how to get a job. In a manufacturing business, the steps are a lot more complicated."

When it comes to encouraging interest in confectionery careers, Clair suggests touting sustainability, the origins of chocolate and the artistry of confectionery, which are areas she says many students are especially interested in.



Linda Sahagian (left), founder of Sahagian & Assoc., Inc., talks to Chicago-area culinary students at the 2013 Sweets & Snack Expo about careers in confectionery manufacturing.

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Elmer Candy Corp.

Addressing students at the 2013 Expo, Clair said: "What we'd like you to see today is that the skills, techniques and decision-making methods you are learning in your culinary programs directly apply to manufacturing in the confectionery industry. You are learning food handling, food and personal safety and equipment. These are vital skills in our industry."

The PMCA has a similar Student Outreach Program in which students can attend the organization's Annual Production Conference. In another initiative, the association encourages its member companies to send employees to its facility for training and hosts courses at company plants. In March, more than 30 industry workers participated in a panning course at Warrell's factory in Camp Hill, PA.

THE IMPORTANCE OF PARTNERSHIPS

Looking ahead, one educational and policy studies non-profit, The Aspen Institute, recommends manufacturers team with community colleges that can provide greater access to potential employees. Located in all 50 states and offering flexible class times, many community colleges have open admissions policies, allowing the majority of employees to enroll and take classes.

Campbell says companies should also communicate their needs to local Workforce Investment Act (WIA) agencies: "It's about saying, 'Here's the kind of workers we need. What can you do to develop our needs?' Work with other businesses in your area to influence your educational system. Often, the money educators get flows through the WIA agencies, so the they can broker relationships."

Tandle says Warrell has consulted with its local economic development agency to connect with nearby schools and is working with other area employers and the Manufacturing Association of South Central PA to promote iexploremanufacturingcareers.com. The website offers educational videos on manufacturing, research and facts, information about careers and training programs available, related articles and links, and a question-and-answer section.

Farther south, by supporting high-profile development projects such as the extension of the local public library, Nelson says Elmer makes itself visible to potential employees. He explains that if the company can find motivated applicants, Elmer can lead them to success.

"If you have the right system in place in your company you can bring in a 'C' player and make them an 'A' player," Nelson says. "It's about creating opportunities for people so they can see what they can be and showing them how they can get there." **NCA**