

Ohio schools, business work to revitalize manufacturing



Guests at a Honda North America Inc. workforce development event take a look inside one of the mobile manufacturing labs that are part of a \$1 million Honda initiative to spur interest in and provide training for manufacturing careers.

Career-tech, industry collaborate to fill jobs gap

Kelsey Webb, communications coordinator, Ohio Hi-Point Career Center

The manufacturing industry is struggling with the steep decline in available talent. More than 2 million of 3.5 million jobs will be left vacant in the coming years, according to Deloitte LLP and the Manufacturing Institute.

“Skills shortage” and “Manufacturing jobs go unfilled” have been recent headlines in local and national newspapers.

Industry leaders are looking for solutions. Career-technical education is part of that solution.

Career centers across Ohio, like the **Ohio Hi-Point Career Center** in Bellefontaine, provide hands-on, real-world career training for high school students in fields such as welding, engineering, health care, construction, multimedia marketing, electronics and manufacturing. Students have the opportunity

to earn industry certifications and college credit while enrolled in the programs.

The Ohio Hi-Point Career Center serves students from 14 partner school districts in Auglaize, Champaign, Hardin, Logan and Union counties. High school juniors and seniors participate in the career center’s 16 programs at the main campus in Bellefontaine, while nearly 30 career programs are available to students as early as the seventh and eighth grades at satellite locations in the center’s partner schools.

The relevancy of career centers relies on the partnerships forged between education and businesses to engage students in future careers. Industry advisers provide guidance to career centers by fusing the industry knowledge and skills required into the curriculum and equipment selection for each program lab.

The skills gap

According to a study released by Deloitte and the Manufacturing Institute, the skills gap is widening as a result of an aging workforce; an estimated 2.5 million jobs will likely need to be filled due to retirements.

The skills gap also can be explained by a poll conducted by the Foundation of Fabricators & Manufacturers Association, which found that 52% of teenagers in the U.S. said they have no interest in a manufacturing career. Of that 52%, about two-thirds saw manufacturing as a “dirty, dangerous career” that had little to no opportunity for growth or advancement.”

These stereotypes are not true of today’s manufacturing needs.

According to the Manufacturing Institute, the most needed traits are technology and computer skills, problem-solving skills, technical training and math skills. All are required to operate and maintain high-end robotics and machines, which must be maintained in a safe and spotless environment.

The skills gap also affects the U.S. economy. Deloitte and the Manufacturing Institute reported that every dollar spent in manufacturing adds \$1.37 to the U.S. economy, and every 100 jobs in manufacturing create an additional 250 jobs in other sectors.

Industry and career centers are working to educate the public about the changing world of manufacturing to combat the 2 million manufacturing jobs that are at risk of going unfilled because of the talent shortage.

Answering the call

“Manufacturers need skilled workers right now, and we’re answering the call,” said Ohio Hi-Point Career Center Satellite Director **Debbie Wortman**.

In addition to Ohio Hi-Point’s electronics engineering and welding programs on the main campus, the career center is implementing three manufacturing programs for the 2016-17 school year at **Bellefontaine City’s** Bellefontaine High School in Logan County; **Triad Local’s** Triad High School and Middle School in Champaign County; and **Kenton City’s** Kenton High School and Middle School in Hardin County.

The manufacturing programs are not funded through state grants; therefore, the initial startup costs are absorbed through Ohio Hi-Point’s general fund money.

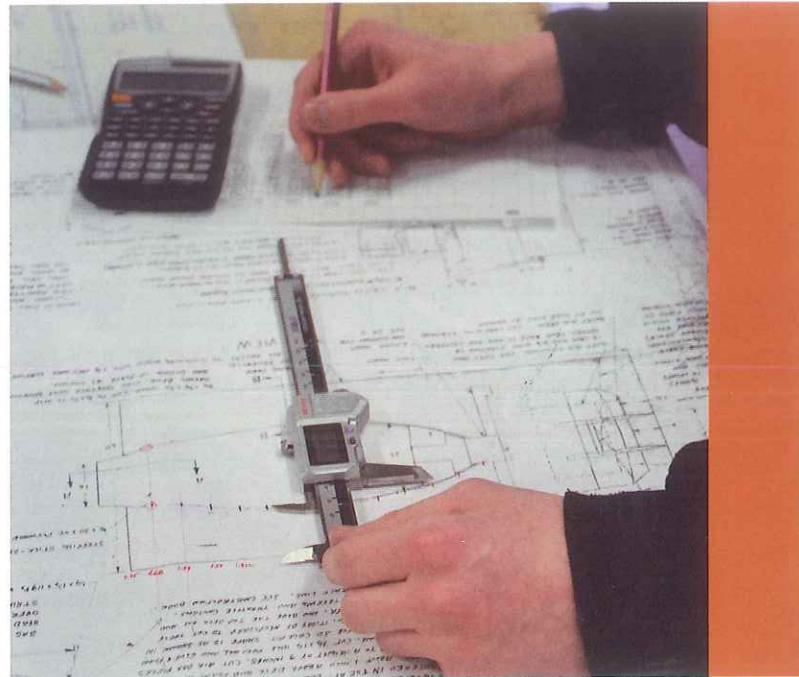
“Ohio Hi-Point has a limited budget, and it was either do one manufacturing program at a time over the course of many years, or do it on a shoestring budget and start sooner,” Wortman said. “The answer is clear as we’re putting in three manufacturing programs for the start of the next school year.”

Since the programs do not have state grants, the district, with

guidance from industry advisers, is buying the most crucial pieces of equipment first and will continue to add more each year. The advisers also heavily influence the curriculum.

The hands-on experience with equipment is so critical that several partner industries have expressed an interest in hosting internship programs during the students’ senior year.

Enrollment in the new programs looks strong, with more than 40 students enrolled in each program at Bellefontaine High School, Triad High School and Triad Middle School, as well as approximately 90 students at Kenton High School and 120 at Kenton Middle School.



A student in Ohio Hi-Point Career Center's welding program works on a hovercraft blueprint. Students in the program are building the hovercraft based on their own designs.

In addition to developing future students, Ohio Hi-Point also is assisting adult workers in the district through the Business Resource Center and a partnership with Clark State Community College to provide the training and skills necessary to fill jobs.

“We’re changing the way we think and how we handle business,” said **Joel Staudter**, Ohio Hi-Point director of district operations and continuous improvement. “We’re becoming more efficient in our processes and we move faster to meet the demands of the industry.”

Collaborating together

In addition to the internships, program advisory committees, school-to-work opportunities with local businesses and the collaboration between county chambers and workforce development taskforces, program curriculum continues to evolve to meet industry needs and impact student education.

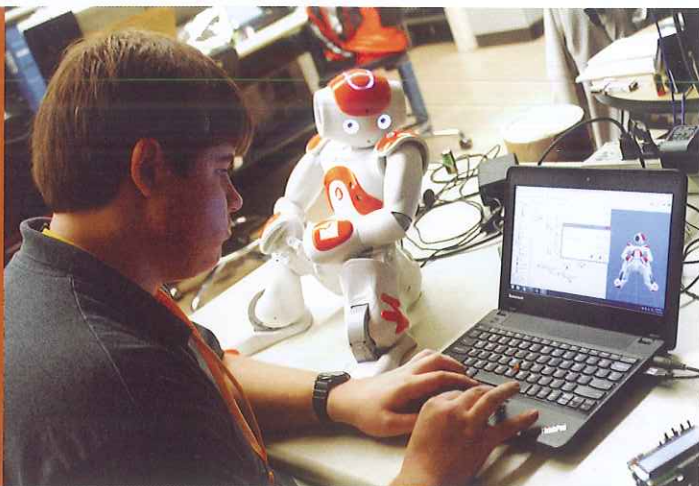
Ohio Hi-Point is 30 miles from Honda operations that include five manufacturing plants and the Honda R&D Ohio Center.

In March, the company announced a \$1 million initiative to “create interest in manufacturing careers and provide educational and training opportunities to prepare the next generation workforce for high-tech positions in the manufacturing industry.”

The initiative, called EPIC, includes programs for middle school to community college students, as well as continuing educational programs for Honda associates.

According to Honda North America Inc., the EPIC program draws its name from the four key areas of the initiative:

- creating *enthusiasm* about manufacturing among middle school students;
- encouraging *passion* among high school students to harness the power of technology;
- promoting *innovative* instruction at two-year colleges;
- continuing *commitment* to further educational opportunities for Honda associates.



Jeremy Kirkendale, an electronics engineering student at Ohio Hi-Point Career Center, works with NAO, an autonomous, programmable robot.

Scot McLemore, Honda North America Inc. technical workforce development manager, is focused on creating a talent pool from the EPIC program.

“We’d like to see a pipeline of talent fill up for the manufacturing business, not just at Honda,” McLemore said. “As the industry continues to have advanced automation and technology, we need those skills and knowledge in our operations plan. Everybody in the industry wants to see the numbers increase and see new and fresh ideas about how to implement and maintain that technology.”

Honda partnered with Ohio Hi-Point, **Marysville EV’s** Marysville High School and Columbus State Community

College to open the Marysville Early College STEM School in Union County in August 2014. The STEM school was made possible through a state Straight A Fund grant and is an option for students in grades nine through 12.

Honda also sits on the advisory committees for Ohio Hi-Point’s new manufacturing programs, working with local manufacturers to instill advanced automation curriculum and equipment into program development.

Honda piloted a work-study program with Columbus State Community College this year. Students work at Honda three days a week and take classes for two days. Honda is now working with the Ohio Board of Regents to facilitate discussions with other colleges to allow students to build technical skills while earning a paycheck and a degree.

The partnerships created through education and industry are only the beginning.

Educating families

The first step, Wortman said, is connecting with parents and students. “We need to get in front of parents since they are a large factor in the decision-making process. Manufacturing isn’t what it used to be. It’s high-tech, clean with the most advanced form of technology and robotics being used to create products. It’s a solid career choice for their child with very little debt.”

McLemore added, “Not only do we need to engage students in the classroom, but also engage them in a future career choice. These students can gain hands-on experience, have an internship at a business and begin working full time or continue on to earn a two-year degree through work-study programs.”

In 2013, an average manufacturing employee in the U.S. earned about \$77,000, nearly 20% higher than what an average worker earned in other industries. In a survey conducted by Deloitte and the Manufacturing Institute, manufacturing companies stated they are willing to pay more than current market rates to hire talent and retain workers to lessen the skills gap.

“We hope this will change the conversation at the dinner table for parents about what pathway their child is going to take,” McLemore said.

Coupled with hands-on experience, Summer STEM Techie camps and mobile labs visiting area schools and communities, education and industry hope to open the eyes of middle school students, high school students and parents to the advancing world of manufacturing.

The efforts of all the state’s career centers and business and industry leaders contribute to the success of the job market and economy. The foundation has been set and the opportunities to intertwine business and education will only continue to grow. ■