HARNESSING INDUSTRY'S 'PERFECT STORM'

Vincennes University Partners to Help Bridge Skills Gap

By Katie Coffin

Business is good at Subaru of Indiana Automotive, Inc. (SIA) in Lafayette. The plant is expanding, with production of the Impreza set to begin in late 2016.

But there's a speed bump fast approaching that could cause SIA and similar companies across the state to tap the brakes, if not come to a devastating halt.

The "middle-skills gap" is troubling some of Indiana's biggest industries: advanced manufacturing, distribution and logistics, and the skilled trades, to name a few. Middle-skills jobs are those that call for more than a high school diploma but less than a four-year degree – and there is a critical shortage of workers with these credentials.

Brad Rhorer, manager of associate development at SIA, says highly-technical positions that require a certification or two-year degree are the most difficult for the company to fill.

"The industrial maintenance positions are very in-depth in knowledge and experience, and a lot of people do not have (skills in) those crafts any longer," he emphasizes. "And we've got an aging workforce, so retirements are looming at the same time we're expanding. It's the perfect storm."

A potential solution, some say, is to better coordinate education curriculum and work-based learning with real-world employer needs.

Enter Vincennes University (VU).

Two heads are better than one

VU, Indiana's first college and one of the nation's oldest two-year institutions, has a long and celebrated history of educational excellence. VU's job placement rate is about 93%, with 90% of those

Hands-on learning is the key at Vincennes University's Aviation Technology Center, where students will work on aircraft or pilot an airplane within the first week of class.

taking students back to their hometowns.

Part of that success is a result of VU creating collaborations – be it with an employer, school or city – a part of its higher education model and showing how partnerships allow for more practical programming and better career opportunities for students.

"Business and industry know their needs better than we as an institution know those needs, so we operate from that as a beginning point in any discussion we have with a community or business and industry partner," university president Dick Helton explains. "We have found that approach is very receptive."

Within a few years, VU has taken this collaborative approach to a new level. Classroom time remains important, but now the premium is supplementing book knowledge with hands-on experience, many times off campus and often outside the city of Vincennes with a variety of partners.

"I think the real driver for our partnerships was a result of our business and industry partners coming to us and saying, 'We know that we have a population of people working for us who will be retiring in the next eight to 10 years. We also know it's going to become more difficult to find qualified workers. So let's work together to see if we can't find some way to develop more skilled employees. That helps your students. That helps our business,' " Helton recounts. "We believe ultimately the student wins in this endeavor and when you think about that, why wouldn't you do it?"

Cruisin' to a career

VU students win by walking away with high-demand credentials, experience and, more often than not, immediate gainful employment. VU's partnerships with Toyota Motor Manufacturing Indiana (TMMI) and SIA are prime examples of this working model.

The Toyota Advanced Manufacturing Technician (AMT) program is an intense combination of classwork and paid work experience. Students can earn as much as $30,000 – which can cover all of their education expenses – in two years and an associate's degree in computer-integrated manufacturing/robotics. Graduates hired by TMMI as skilled maintenance team members have the potential to earn a base salary of $64,000.

The SIA Advanced Internship in Manufacturing (AIM) program operates with a similar model.

Students admitted into the AIM program begin with classroom work at Vincennes, where they learn advanced manufacturing technologies. In their second semester, they take classes two days a week at Purdue University's College of Technology Lafayette site, located at the SIA plant, to earn their VU associate's degree in computer integrated manufacturing. They spend the remaining three days applying classroom knowledge in various technical rotation assignments at SIA.

"The AIM program is a vital component to our workforce development strategy," Rhorer details. "We are now able to focus the curriculum to better meet the ever-changing needs of our manufacturing process."

Upon completion of the AIM program, graduates will qualify for a full-time position at SIA. After six months of full-time employment, graduates can continue their education at the Purdue College of Technology Lafayette SIA site and earn a Purdue bachelor's degree in engineering technology, paid for by SIA.

The inaugural group of nine students finished its first semester of classes on VU's campus at the end of 2014. They began working and taking classes in Lafayette in January.

"This program has actually afforded us the ability to go to high schools and recruit," Rhorer notes. "We're able to talk to every grade level about manufacturing. We show them what the environment looks like, explain the opportunities and shake off the dark-and-dirty factory floor perception that still exists."

Knowledge takes flight

VU's footprint in advanced manufacturing and the automotive industry just scratches the surface of its educational offerings.

VU has had an aviation program since the 1960s; in the early 1990s, the Aviation Technology Center (ATC) was developed at the Indianapolis International Airport. The ATC offers advanced aviation labs, testing equipment and elaborate maintenance hangars. It also features a fully functioning 737 for maintenance training. In fact, the ATC is the only school in the country that has a fully-functioning 737 under roof.

The Vincennes University Flight program features a fleet of well-maintained aircraft, including Cessna 172s, a Cessna 172RG, a Piper Seminole and a Piper Seneca. Class sizes are small to promote one-on-one instruction, and the crux of the program is "learning by doing."

"It's critical to make the connection to what students just read in a textbook and what they're actually going to be doing in the industry," outlines Corinna Vonderwell, director of marketing and student services coordinator at the ATC. "Our maintenance students are working on aircraft and our flight students are going to be piloting an airplane – all in the first week of classes."

The ATC is producing well-trained aviation technicians and pilots with the support of a variety of industry partners, including AAR, an aviation services and products company that offers paid internships to several VU students in the maintenance program.

"AAR is a first-class company where students gain hands-on big

Students in the Subaru AIM program will learn to install, program, interface, service, troubleshoot and implement automated equipment for advanced manufacturing and will qualify for a full-time position at SIA following completion.

airplane experience while they are still in school," Vonderwell asserts. "This is the type of experience that students won't find anywhere else."

And job prospects are good for these students. A certified mechanic can earn $50,000 to $55,000 per year; the program produced 16 mechanics in July. All are now employed.

Part of the solution

In fall 2013, the Vincennes University Jasper Campus (VUJC) began a partnership with seven Jasper-area companies.

Building on VUJC's existing associate degree program in career tech manufacturing, these companies hire students part time while they are enrolled in VUJC full time. Students finish with a credential, two years of work experience, little to no debt and strong consideration for full-time employment.

This fall, construction began on the Gene Haas Training Center in Lebanon, a product of a partnership between VU, the city of Lebanon and machine tool builder Haas Automation. VU will operate the new training center, offering CNC machinist training programs and industry-standard certification from the National Institute of Metalworking Skills. The center is expected to be operational for the 2015-2016 school year.

Provost Chuck Johnson said VU continues to have conversations with employers, economic development organizations, and secondary and postsecondary institutions in every corner of the state to build opportunities to bridge the skills gap and retain talent. Adapting existing models for different industry sectors and addressing emerging skills shortages will be VU's focus moving forward.

"In a nutshell, we're about helping Indiana and the Midwest and the United States close the skills gap," he concludes. "Whether that's through the traditional programs we offer or through these unique, work-based learning partnerships, it's about being part of the solution."

RESOURCES: Dick Helton and Chuck Johnson, Vincennes University, at www.vinu.edu | Brad Rhorer, Subaru of Indiana Automotive, Inc., at www.subaru-sia.com | Corinna Vonderwell, Vincennes University Aviation Technology Center, at www.aviationtechcenter.com