

ADAPT: Cultivating Skilled Manufacturers In Rural Wisconsin

Manufacturing is central to people's livelihoods in rural Wisconsin. Increasingly, however, the innovations that manufacturing companies need to incorporate to stay competitive are profound.

An exciting new partnership between local schools, Western Technical College and Ashley Furniture Industries aims to cultivate a skilled workforce by providing innovative educational programs. This project will ensure that cutting-edge technologies are at the forefront of manufacturing in rural Wisconsin, while providing fulfilling careers for young people.

The ADAPT Project

A core component of this partnership is a project entitled Automation Workforce Development through Aligned Industry Partnerships and Training (ADAPT), spearheaded by Dr. Joshua Gamer at Western Technical College.

ADAPT aims to create a pipeline of graduates in the field of mechatronics. This multidisciplinary branch of engineering combines robotics, Industrial Internet of Things (IIoT), telecommunications, and product engineering. Mechatronics graduates who are skilled in advanced automation and IIoT are required in the shift to 'Industry 4.0', which involves the automation of traditional manufacturing using smart technology.

TVC 2.0 and Ashley

At the same time that Dr. Gamer conceived ADAPT project, Superintendent Mike Beighley knew that change was needed within the school system of Trempealeau County. He knew that if the region's schools continued along the same path, the local economy and students' career opportunities would suffer.

Mike and the superintendents in neighboring school districts began discussing how they could better utilize the available resources. From these discussions, the Trempealeau Valley Cooperative (TVC 2.0) was created. Their vision is to develop career-ready and college-ready students by providing high-caliber learning experiences, preparation and pathways, in partnership with the wider community.

To help them to achieve their vision, TVC 2.0 formed a collaboration with both Dr. Gamer at Western Technical College and Ashley Furniture Industries – one of the largest employers in Western Wisconsin. Working together, the team has set out three broader goals for the ADAPT project. Firstly, they aim to increase opportunities for mechatronics training programs, to be integrated into the curricula of local schools and Western Technical College. Secondly, they plan to increase recruitment, retention, graduation, and employment of the mechatronics-skilled workforce, focusing on increasing workforce diversity. Finally, the team aims to expand the commitments of local industries in co-delivering these courses and forge pathways into universities.



The Mobile Skills Laboratory

For this program to be successful, students would need to have access to equipment. Since it would be far too expensive for every institution to own such advanced equipment, the collaboration developed a state-of-the-art, mobile training facility.

The Mobile Skills Laboratory is a 900-square-foot classroom containing cutting-edge technology used in manufacturing, including automation interfaces, smart sensors, programmable logic controls and robotics. The facility now travels between high schools involved in the project – providing a key element of the training required for ADAPT's Advanced Mechatronics program. By taking courses in the Mobile Skills Laboratory, students can earn credentials recognized by industry, awarded by Western Technical College and the Smart Automation Certification Alliance (SACA). Once high school students obtain a certificate in Advanced Mechatronics, their skills enable them to directly enter the workforce, or to further their knowledge in a technical college.

Successes and Impact

The collaborating partners are proud of the project's successes thus far. These include the new Advanced Mechatronics course, the Mobile Skills Laboratory, alignment of the academic programs to SACA credentials, addressing language barriers in recruitment material, a transfer agreement from Western Technical College to the University of Wisconsin-Stout, and the upskilling of teachers in nine school districts and Western Technical College.

Ultimately, ADAPT and the Mobile Skills Laboratory offer students clear pathways towards fulfilling careers through which they can earn excellent wages without moving far from home. Faculty staff can also be assured that their teaching is relevant to the needs of their locality, actively contributing to its economy.

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