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Industry-Education Partnerships in Creating Career Pathways

By Amy King

Industry engagement in career and technical education (CTE) programs not only prepares students with the skills they need for careers,

but it also contributes to the development of clearly defined career pathways that lead students to careers after graduation. If students complete a CTE program, but their efforts are not recognized by industry, then the program has not truly been successful. This burden of success is dependent upon industry and education working together. The best place for employers to recruit from is successful CTE programs, but not all programs are teaching the skills they need. For example, a program may be using outdated curricula or not teaching the most current techniques. By establishing relationships with industry partners, schools can better prepare students with in-demand skills and provide pathways to rewarding careers.

Within the construction industry, many companies and schools are working together to train students for construction



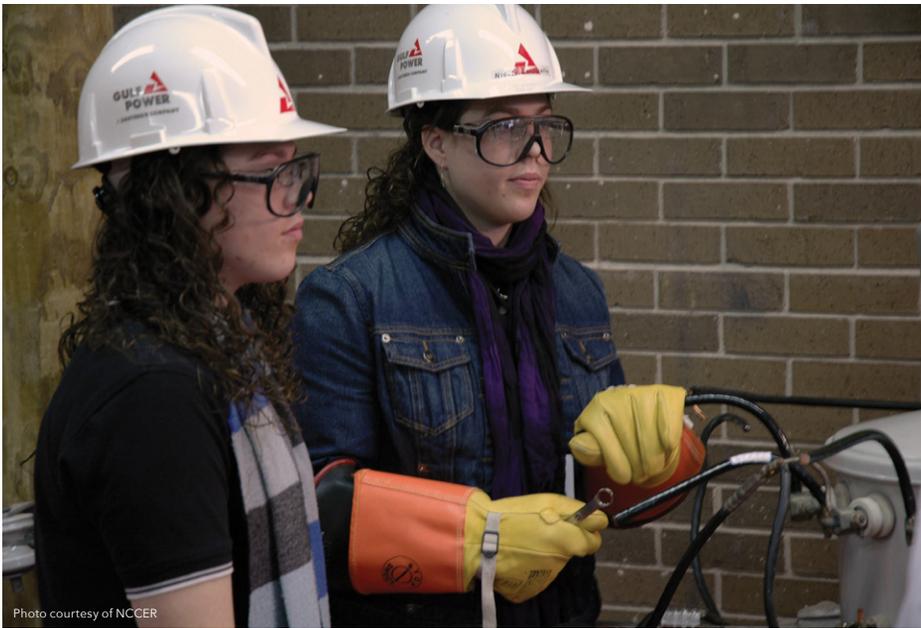


Photo courtesy of NCCER

▲ West Florida High School students participate in the Gulf Power Academy.

careers in an effort to fill a skilled workforce shortage of 1.5 million craft professionals by 2019. Some of these partnerships involve aligning local CTE programs with careers in the community, and other partnerships influence the structure of CTE programs across an entire state.

Aligning CTE Programs With Local Careers

CTE programs that align with the needs of local industry can lead to available careers in a regional economy and provide a direct pipeline for students to employers, making it a win-win situation for both. These programs represent how industry can work hand-in-hand with education to make sure that communities maintain a well-trained workforce.

The Industrial Company and Navajo Technical University

For The Industrial Company (TIC), overcoming the challenge of recruiting new craft professionals entails strengthening its relationships with schools near its project sites. One such school is Navajo Technical University (NTU) in Crown Point, New Mexico. TIC sponsors the electrical program at NTU by providing surplus materials and training aids, such as drawings and company manuals.

As part of the collaboration, TIC pres-

ents to NTU's CTE students each semester about the rewarding career opportunities available in the industry and at TIC. In addition, each summer an NTU electrical instructor works at TIC for up to 12 weeks. This helps the instructor understand TIC's needs, identify content to teach students and stay current on industry developments. TIC also invites instructors from area schools to visit job sites and view the latest technology and methods used in the field.

"If you're not investing in schools or relationships, you're not going to find and hire as many quality graduates," said Jeff Rodenberg, director of TIC's Craft Training Center.

Students benefit greatly from NTU's collaboration with TIC. Not only is there a direct connection to a potential employer, but an NTU student is also able to enter TIC's apprenticeship program as a second-year journeyman. Now in its third year of partnership with NTU, TIC has a steady stream of NTU graduates entering its workforce.

Gulf Power and West Florida High School of Advanced Technology

Faced with a shrinking pool of qualified workers, Gulf Power partnered with West Florida High School of Advanced Technology (WFHS) in 2001 to start Gulf

Power Academy. This four-year program integrates traditional academics with craft and technical training to prepare students for entry-level careers in the electric utility industry and at Gulf Power.

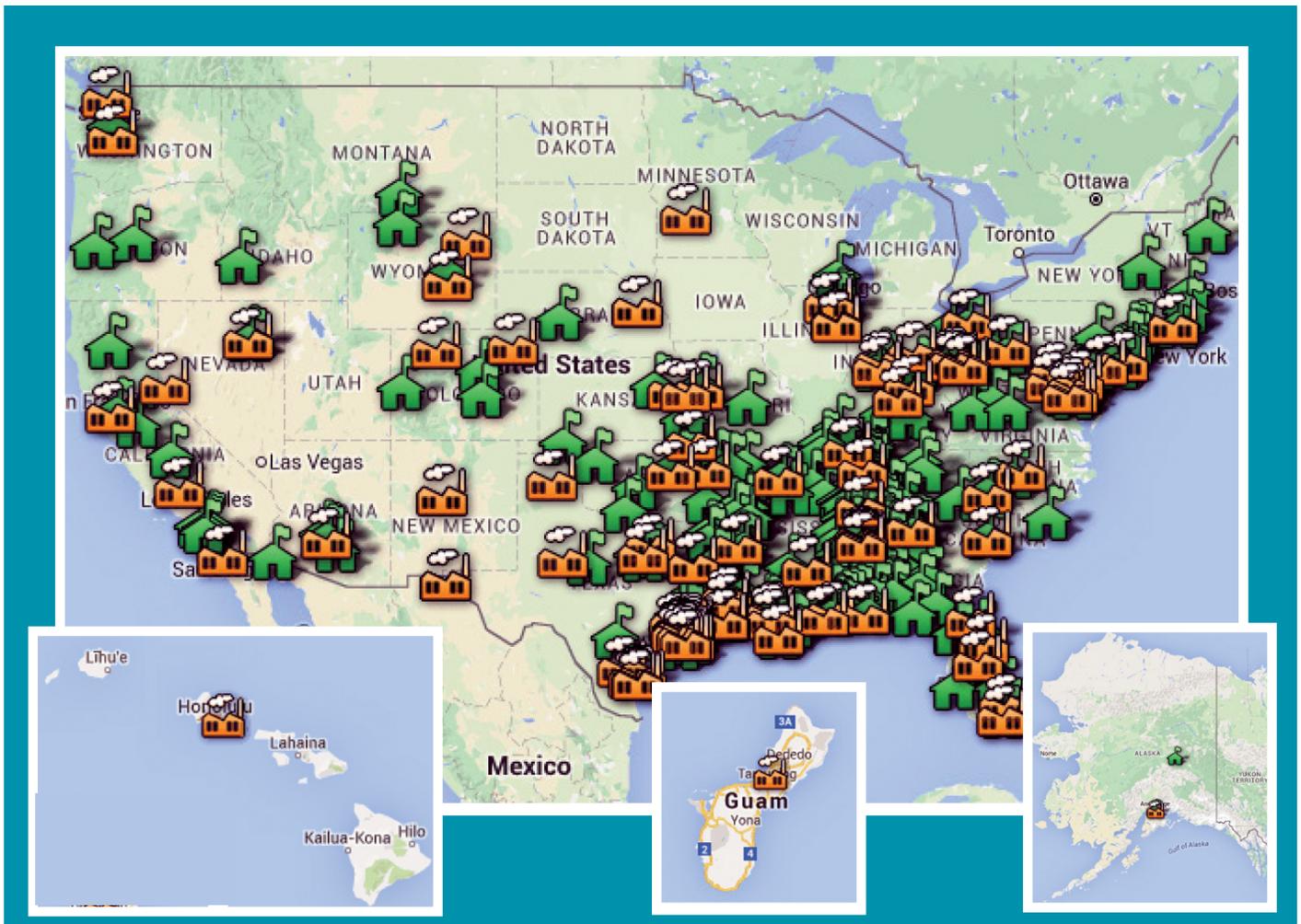
Students in their senior year can choose a career path, and the academy designs an on-the-job schedule around that path for their final semester. Students report individually to Gulf Power on certain days of the week, where they are paid minimum wage and are trained by employees in their chosen career path. The goal of the program is to provide a realistic preview of what the profession entails and give Gulf Power the opportunity to closely evaluate students for job openings. Graduates from the academy receive National Center for Construction Education and Research (NCCER) credentials, and many graduates have been hired by Gulf Power.

"Industry can't simply come in and say, 'This is what we need' and expect schools to deliver a product that meets their needs," said Jennifer Grove, Gulf Power's workforce development coordinator. "We have to truly partner with education to provide relevance and real-world application so that students can be prepared for changing industry needs."

DuPont and Nashville State Community College

Located in a rural area, the DuPont plant in New Johnsonville, Tennessee, struggled to fill vacant positions for mechanical, instrument and electrical technicians. Instead of trying to recruit workers from outside the local community to address this issue, DuPont decided to build its own workforce by developing a training program with Nashville State Community College (NSCC) to offer NCCER curricula and on-the-job experience. Graduates receive an associate degree from NSCC and work experience with DuPont. Ultimately, the program prepares trainees to secure full-time positions at the plant.

Prior to the start of this training program, NSCC offered a degree in Industrial Process Control Technology for several years, but many of their graduates did not meet DuPont's requirements. To ensure future applicants would be qualified, DuPont partnered with the local NSCC campus to develop a co-op training pro-



▲ NCCER's Connection Map allows CTE educators and construction industry members to connect.

gram where the college would provide the academic side of the training for two years and DuPont would offer the on-the-job portion for two-and-a-half years.

During the first part of the program, students take classes two to three days per week at NSCC while also working part time at the plant and earning a paycheck. In the final year of the program, trainees work full time at DuPont. By having trainees take classes and work at the same time, the program allows them to apply the skills they are studying in school. This final stretch of training prepares trainees to earn NCCER credentials and for DuPont to consider them for full-time employment.

Aligning CTE Programs With In-demand Skills

Bringing education and industry together at the same table allows program stan-

dards, curricula and instructional strategies to be aligned with the skills employers need. Some states have stepped up and reevaluated the structure of their CTE programs to accommodate this.

Alabama State Department of Education

Recognizing a need for better career pathways for students, Alabama's legislature passed a law requiring all Alabama State Department of Education (ALSDE) CTE programs to have industry-supported advisory programs so that industry can influence the training process and help students become career-ready upon graduation. Advisory committees meet regularly to evaluate goals, validate curricula and ensure that students are learning appropriate skills for employment after high school.

"The first and most important step in collaboration is to go beyond the educa-

tion system and connect with industry partners," said Philip Cleveland, ALSDE's director of the Office of Career and Technical Education/Workforce Development. "Education cannot set the target for industry; it has to come from industry."

In 2015, ALSDE launched the Alabama Simulated Workplace to create an environment modeled after the workplace. Students log their time and attendance and receive a simulated paycheck. Instead of receiving a letter grade, students receive feedback on how to improve for their career. Graduates of ALSDE-endorsed workplaces receive a high school diploma, an ALSDE credential and an industry credential. As a result of ALSDE's programs, more students are earning industry credentials than ever before. According to NCCER's Registry, from 2013 to 2014, NCCER module completions rose by nearly 90 percent in ALSDE construction programs.

Guide for Effective Collaboration

1. Analyze your need.
2. Research existing programs.
3. Identify available resources.
4. Identify stakeholders.
5. Establish your organization's goals and objectives.
6. Reach out to potential partners.
7. Collaborate with partners to develop a plan.
8. Determine the scope of partnership.
9. Develop a marketing strategy.
10. Implement the collaborative plan.
11. Meet routinely to maintain progress.
12. Evaluate the program.

* Find the full guide at www.nccer.org and search for "Industry Education: A Guide to Effective Collaboration."

The Louisiana Workforce Investment Council

The Louisiana Workforce Investment Council (LWIC) is a demand-driven system that responds to industry needs. To address the state's skills gap, LWIC formed the Craft Task Force with representatives from industry, state agencies, high schools, technical colleges and private training providers.

In addition, the Louisiana Department of Education, along with LWIC, advocated restructuring state CTE programs. As a result, the legislature created two tracks—university and career—and changed the curriculum. Students take the same classes

for their first two years of high school and select tracks prior to their junior year. A core component of graduating from the career-oriented track is the requirement to have an industry-based certificate, which ties into how schools are funded. Schools earn points through graduation rates, as well as the number and types of certificates students earn.

As the craft industry in Louisiana faces a potential shortage of qualified workers and schools are trying to place students into successful, well-paying careers, LWIC is able to facilitate significant legislative changes and long-term collaboration to help make this happen.

North Carolina Department of Public Instruction

The North Carolina Department of Public Instruction (NCDPI) represents the public school system for the entire state. Its NCCER construction program partners with various industry associations and is closely monitored by statewide associations, contractors, community colleges and other workforce development agencies to meet industry demand. Each partnership plays a unique role, with regional and state-level associations collaborating with local contractors and suppliers to serve on advisory committees and provide guidance. Industry partners arrange field trips, provide materials and supplies, serve as guest speakers and chair SkillsUSA® competitions. To provide a clear path for students, the North Carolina Community College Board is also involved in the partnership, allowing high school instructors to collaborate with college instructors who also offer NCCER credentials.

The collaborative efforts between education and industry, along with consistent communication and direct leadership, have helped contribute greatly to the success of NCDPI's CTE programs. According to Craig Pendergraft, education consultant for NCDPI's CTE division, 94 percent of all North Carolina students enrolled in a CTE program graduated high school in 2012, compared to 80 percent of traditional students. In addition, high school students obtain industry credentials and skills, making them more marketable to employers and better prepared for post-secondary education.

"Communication, collaboration and

leadership are vital attributes that have helped ensure success with implementing, maintaining and growing our NCCER programs," said Pendergraft.

Collaboration Is Profitable

At the core of any partnership is making sure everyone understands how collaboration is profitable. Bringing together industry and education stakeholders who have a vested interest in each other's success allows students to obtain careers upon graduation and employers to hire qualified employees.

To promote industry and education partnerships in the construction industry, NCCER, a not-for-profit construction education organization, began hosting its annual Construction Career Pathways Conference in 2013 prior to ACTE's CareerTech VISION. The goal of the conference is to bring together industry representatives and education professionals to align CTE programs with industry needs.

As a result of the annual conference, various resources have been developed to help facilitate these partnerships, including best practice profiles of successful industry-education partnerships; a connection map (<http://pathways.nccer.org/connection-map>) for industry and education representatives to identify each other's regional needs; and the *Guide for Effective Collaboration* that features steps to establish a successful partnership. Each of the 12 steps outlined in the guide includes a summary describing the step and how to accomplish it, as well as examples from best practices and questions to consider (see sidebar).

Successful career pathways rely on strong relationships. When instructors build relationships with industry representatives, their students not only learn the skills employers need, but they also become familiar with local company culture. Through sustained industry partnerships, schools can provide clear career pathways for students and employers can fill vacant positions, making it a profitable venture for everyone involved. [Tech](#)

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