



The School of Advanced & Applied Technologies

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**College and Community Collaborations in
Perkins Funded Career and Technical Education Programs**

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United States House of Representatives
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Thank you Chairman Kline, Ranking Member Miller and Members of the Committee. My name is Michael Spangler and I serve as Dean of the School of Advanced & Applied Technologies at the College of Southern Nevada here in Las Vegas. CSN is the largest higher education institution in Nevada and one of the largest in the country. We offer certificates, associate degrees, and bachelor degrees in many Career and Technical Education (CTE) disciplines.

I am grateful for the opportunity to share with you today some examples of the interactions between our Career and Technical Education programs at CSN and our stakeholders in business, government, and education. These cases illustrate the commitment of the college and the local business community to building a skilled employable workforce. Additionally they demonstrate the need for continued support through the Carl D. Perkins Career and Technical Education Act, the principal tool by which educators can remain active partners with industry.

I would like to start with a local perspective. Few states have felt the recessionary sting as acutely as Nevada. Wholesale disruptions in employment for industries such as Construction, Hospitality, and Retail have presented significant challenges to CTE programs at the College of Southern Nevada. Displaced workers are seeking new pathways to employment stability. Young people are leaving high school seeking new technical disciplines unknown to their parents. Both groups want careers that offer challenge and fulfillment as well as, at minimum, a middle-class lifestyle with a family sustainable wage. With very few exceptions, these professions require advanced preparation first at the high school and followed by some form of post-secondary technical education. That form may be an apprenticeship but most commonly it is a technical program such as those at CSN. Whatever the path, collaboration among the partners in education and employment is critical.

Leverage from Perkins funds has been essential in our cooperative ventures with the community. The first example I would like to present is CSN's Engineering Technology-Electronics program alliance with JT3, a defense contractor working on military projects in this state. The JT3 Jumpstart Program helps us encourage students to pursue Electronics with the following incentives:

- Qualified students who pass a six course sequence in Math and Electronics receive an interview for an Electronics Technician I position with JT3.
- If the interview is successful JT3 may,
 - Offer a sign-on bonus to cover out-of-pocket tuition costs.
 - Pay for the rest of the classes through JT3's Employee Education Training and Assistance Program (EETAP).
 - Allow employees to attend up to 15 hours of classes each week while on the job.
- CSN, through Perkins funding, provides laboratories with trainers in Microwave, Radar, and other technologies directly related to the skillsets needed by JT3.
- JT3 Engineers serve as part-time instructors bringing the most current and relevant content to the classroom for all students.

- CSN schedules courses to accommodate the unique attendance needs of JT3 employees.

JT3 and CSN together vector the student through to graduation with the Associate of Applied Science degree in Engineering Technology. The dividends of this partnership yield more than just for the JT3 students. All Electronics students benefit through better course availability, state-of-the art laboratory technology, and an expanded talent pool of instructors.

Another Engineering Technology program in Theater Technology is the result of CTE stakeholders' interaction to form a unique degree from a common skill set. CSN works with Cirque du Soleil to prepare technicians for the large venue shows on the Las Vegas Strip. When one looks at the technology necessary to execute a production such as the "O" show at Bellagio, it is apparent that there is more going into the stagecraft than just painting sets or pulling on ropes. The needs at Cirque du Soleil for automation, programmable logic controllers, hydraulics, pneumatics, electrical power, and computer systems rival any industrial plant in the country. In fact the knowledge base is such that Technical Theater majors can transfer their skillset very readily. Cirque's competition for technical talent isn't Broadway; it's Caterpillar, Boeing, Ford, or General Electric. The program at CSN exists because the technical management at Cirque du Soleil led the faculty in the program design and volunteered to host a two semester internship at the theater for an unparalleled work-based learning experience after the academic preparation. Perkins funding equipped the laboratories without which the degree could not be delivered.

An additional collaboration is a pilot program offered by the College of Southern Nevada and the Clark County School District. Using Perkins funds to underwrite the instructional costs, programs recommended by industry groups in Aviation, Air Conditioning, and Welding were delivered at the college for selected high school students. These programs are expensive and extremely difficult for secondary schools to deliver.

However, the infrastructure already existed at the college and with creative scheduling the two institutions collaborated to present a dual credit program. Students from three local high schools were selected to participate. They attended their home high school in the mornings and were released to attend the college program in the afternoons. The students accrue credit at both institutions and progress to industry certifications. As the pilot study is refined, we hope to extend the model to other CTE programs allowing us to accelerate young technicians into the workforce.

My final example of a cooperative endeavor between CSN and local industry is the Gas Heat Pump Technology (GHP) project in our Air Conditioning & Refrigeration program. Not unexpectedly, the College of Southern Nevada is home to the country's premier HVACR program. This is, after all, Las Vegas. Our local economy requires ample amounts of cool air and cold drinks.

Created by a partnership among the college, Department of Energy, Southwest Gas and IntelliChoice Energy, the GHP courses teach technicians to install and maintain natural gas powered heat pumps for air handling in large commercial spaces. The technology is new to the United States and uses about 80 percent less electrical energy compared to today's traditional heating and cooling systems.

CSN is the sole provider of skilled personnel for this groundbreaking new technology because Perkins funds could be leveraged with Department of Energy funding, and private industry investment.

From a 2012 CSN press release: Shawn Greene, a 24-year-old with some college credit, was laid off from his job at a local air conditioning company this summer, when he enrolled in the brand new natural gas heat pump program at CSN. Greene was hired mid-fall semester by IntelliChoice Energy, where he now works in research and development. He will graduate with an Associate of Applied Science in Air Conditioning

Technology. "I got the confidence and experience I needed at CSN and it opened doors for me," Greene said. "I love my job."

I stated earlier that Nevada has had to face some extraordinary upheavals in the workforce. Our job losses place us at the top of a very undesirable list. My opinion, however, is that our unemployment issues are to a great extent issues of underpreparation. The high-tech, high-demand, high-wage, disciplines at CSN such as Air Conditioning, Electronics, IT Networking, and Telecommunications enjoy 100 percent placement, indeed, in these areas virtually all our students are working before they finish their degree. My perception of the best path across our current employment landscape is through CTE. Meanwhile, Perkins funding remains the life blood of Career and Technical Education programs.

I want to thank the committee for your consideration of my testimony. And, I applaud your continued support of Career and Technical programs across our country.

Respectfully,

A handwritten signature in black ink that reads "Michael Spangler". The signature is written in a cursive, flowing style.

Dr. Michael Spangler,

Dean, School of Advanced & Applied Technologies

College of Southern Nevada