

**SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION:
QUESTIONS FOR THE RECORD**

**HEARING ON
CLOSING THE SKILLS GAP AND BOOSTING U.S. COMPETITIVENESS
MARCH 29, 2017**

Written Questions Submitted to Colonel Michael Cartney (USAF, retired), President, Lake Area Technical Institute

Submitted by Senator Heller

Question. Nevada has developed great programs for meeting our state-specific skills gap. But we can't guarantee that students will move toward these fields.

How do we encourage students to pursue fields—like autonomous vehicles, energy storage, and cybersecurity—that will help states like Nevada close their own skills gaps?

Answer. Thank you for your question. Attracting students, both traditional and non-traditional is really at the core of our workforce skills gap dilemma. Generally, there are three areas of focus that must be addressed: 1) the community must value the occupation, 2) the education has to be achievable, and 3) there has to be a quantifiable return on investment for the student.

How a community values an occupation is a perception that needs to be addressed by industry as well as education. Often, the first step is exposure to prospective students and the families, of the career and its benefits. We are not going to attract students to the energy storage industry if they do not even know what it is. Industry plays a key role in imaging, and often re-imaging, their industry. Most work environments have evolved significantly in the past 30 years, but someone not in that industry will be unaware of the changes if someone is not out proactively informing the community. National campaigns, such as General Electric's recent series of commercials, can be strong influences in getting potential students interested in technical careers, and thus technical education. This past year, the voters of South Dakota, with overwhelming support for industry, passed a constitutional amendment recognizing post-secondary technical education as the third form of education in our state. If industries and educational communities together raise the awareness of an occupation's value, it will make those seeking and entering that occupation feel valued.

Once the community values the occupation, potential employees must see the path to that occupation as achievable. Achievable must go well passed superb colleges like your Great Basin College providing industry aligned technical programming. It means the training, education, and ultimately good paying positions are readily available, and potential employees (students) believe the pathway before them is within their reach. A good college education requires work, but Lake Area Technical Institute has found that confidence in themselves and valuing the occupation are better indicators of student success than high school GPAs.

Before anyone walks a path, they must believe it is a journey worth taking. And, although there is significant merit to the self-growth aspects of higher education, at the end of the day, for many Americans, it boils down to the return on investment – in the terms of finances. If someone off the street can start at the same salary and position as someone with a college certificate or 2-year degree, then there is no motivation for an individual to seek the education. The bottom line is we must increase the return or change the investment. In order for an occupation requiring college level technical skills to be successful, the industry must value the education in the terms of salary and position – or it can value it by lowering the monetary investment from the student. I dislike the phrase “Free community college,” college costs someone something. But for hundreds of South Dakotas, there is a way to get a college degree for limited monetary investment, as long as you are willing to commit to working in SD, and possibly committing to work for a specific company.

Other references:

I have worked with Great Basin College in the past as part of the Western Interstate Compact on Higher Education (WICHE). My staff and I are always willing to share best practices and talk through specific issues at any time with your educational, industry, or government stakeholders on this topic. We can be reached through www.lakeareatech.edu.

The Aspen Prize for Community College Excellence. <http://highered.aspeninstitute.org/aspen-prize/> is also a great source. With seven years of experience in examining community colleges across the country for best practices, the Aspen Prize organization can point you to colleagues experienced in a number of topics.

Finally, in his book *What Excellent Community Colleges Do*, Joshua S. Wyner draws on the insights and evidence gained in administering the inaugural Aspen Prize for Community College Excellence. This book identifies four domains of excellence—degree completion, equity, student learning, and labor market success—and describes in rich detail the policies and practices that have allowed some community colleges to succeed in these domains. By starting with a holistic definition of excellence, measuring success against that definition, and then identifying practices and policies that align with high levels of student success, Joshua seeks provides a body of knowledge about improving student success in community colleges.

Submitted by Senator Young

Question 1. Colonel Cartney, thank you for taking the time to be here today. I am intrigued in the successes you have seen at your institution. Similarly, I have seen the same dynamic in my home state of Indiana. The shortage of much-needed skills requires a stable pipeline, which many programs at community colleges and our high schools serve to address this issue. Over the past few years, the demand for a skilled workforce has led to increased participation in career and technical education programs. In 2013, over 2,000 high school students were enrolled in some type of CTE coursework in Indiana. In 2014, over 3,000 graduating seniors earned an industry credential, which is an increase of 48 percent from 2012. Even more impressive, 8,603 students earned college credits and saved collectively four million dollars for Hoosier families. What are some ways to expand the growth we have seen in career and technical education? What tools can we provide for our students, their teachers, and the local businesses in our communities to scale up programs that are working?

Answer. Thank you for your questions. As the US Air Force saw fit to sponsor my master's degree work at Purdue University, I know first-hand the top notch higher educational system in Indiana! The Hoosier state can be proud of their educational system. First let's discuss influencing the career and technical education participation in the K12 system. Your state has a strong start on growing CTE, but like South Dakota, it only eases a still looming technically skilled workforce demand.

The short answer would be continuing what you are doing! Continuing to increase your growth would likely mean: earlier exposure, broader engagement, and richer experiences on the K12 side. Allowing industry representatives into classrooms to teach pertinent lessons that include exposure to the career fields, encouraging industry involvement in expanding and enhancing your existing CTE offerings, industry summer camps, career days, exposure to post-secondary career programs through online and on-campus experiences, and then coupling those experiences with a robust CTE dual credit partnership with your state colleges.

At the post-secondary level attracting students, both traditional and non-traditional is really at the core of our workforce skills gap dilemma. Generally, there are three areas of focus that must be addressed: 1) the community must value the occupation, 2) the education has to be achievable, and 3) there has to be a quantifiable return on investment for the student.

How a community values an occupation is a perception that needs to be addressed by industry as well as education. Often, the first step is exposure to prospective students and the families, of the career and its benefits. We are not going to attract students to precision machining if they do not even know what it is. Industry plays a key role in imaging, and often re-imaging, their industry. Most work environments have evolved significantly in the past 30 years, but someone not in that industry will be unaware of the changes if someone is not out proactively informing the community. National campaigns, such as General Electric's recent series of commercials, can be strong influences for getting potential students interested in technical careers, and thus technical education. This past year, the voters of South Dakota, with overwhelming support for industry, passed a constitutional amendment recognizing post-secondary technical education as the third form of education in our state. If industries and educational communities together raise the awareness of an occupation's value, it will make those seeking and entering that occupation feel valued.

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Before anyone walks a path, they must believe it is a journey worth taking. And, although there is significant merit to the self-growth aspects of higher education, at the end of the day, for many Americans, it boils down to the return on investment – in the terms of finances. If someone off the street can start at the same salary and position as someone with a college certificate or 2-year degree, then there is no motivation for an individual to seek the education. The bottom line is we must increase the return or change the investment. In order for an occupation requiring college level technical skills to be successful, the industry must value the education in the terms of salary

and position – or it can value it by lowering the monetary investment from the student. I hesitate on the phrase “Free community college,” college costs someone something. But for hundreds of South Dakotas, there is a way to get a college degree for limited personal monetary investment, as long as you are willing to commit to working in SD, and possibly committing to work for a specific company.

What are some tools you can add to key stakeholder tool bags? The top of the list has to be industry partners. Indiana Industries have a vested interest in your CTE programs and educational offerings. Work with them on identifying and understanding the key role they play in student success. On both the K12 and post-secondary sides industry partners serve as student mentors, advising and consulting on curriculum, and helping provide support structures for students who need one. The formation of industry sector cabals to support programs in high school and postsecondary is key to increasing participation.

Other needed shifts are in our Federal and State approaches to providing higher education in support of employment. There is inherent value in higher education and for many that inherent value, self-growth, and discovery is the justification for seeking higher education. But for millions of Americans, the reason they seek higher education is to better their lives and the lives of the families. Their goal is to achieve the American dream. For them, it is education with a purpose, it is about getting a better job, not just a degree. But, the current system does not serve them well. Requiring someone to get all of their education before they seek employment does not work for millions. Yet all of our systems, processes, and funding seem to be centered around this culture and in this paradigm. This is something that we need to exam and change. We must align our educational and occupational careers, and find ways to meld our financial aid, scholarships, and support systems to enable this.

As one significant component to enable this, Lake Area Tech redefined success as placement, not graduation. With prospective students, we talk about what they want to be, not what degree are they seeking. Redefining success as placed (employed or continuing their education), and making graduation (completion) a step along their journey affects not only the faculty and staff of the institution, but also students, parents, and industry need a different perspective on their education.. At the institutional level, the first step was formally changing our mission statement to “*Lake Area Technical Institute: superior, comprehensive technical education that changes lives and launches careers*” to focus this initiative. This subtle adjustment changes the whole conversation and focus with potential and current students. Rather than discussing degrees, which is an abstract concept to many new students, you are discussing what they want to be, what they want their future to be, and then laying out a path for them to get there. Instead of discussing “where can you go with a particular degree,” you are discussing which degrees can get you to where you want to go. Things become immediately more relevant. Going to class, doing homework, and passing tests – it’s not just about completing a course, but rather, it’s about learning what you need to know to be what you want to be! This subtle but sweeping change gives higher education the purpose our prospective students are looking for.

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Question 2. Colonel Cartney, rural and urban areas often have unique workforce needs specific to their environment. Urban areas may have more job opportunities while rural areas have less openings and rely heavily on a few employers. I see this dynamic across my home state of Indiana, and partnerships in more rural communities – like in Clark County – become vital to the health of the community. However, urban communities may need a slightly different approach. What are some ways we can address the diverse workforce needs of rural and urban areas?

Answer. You are 100% correct, while there is commonality in many aspects of serving an urban versus rural population, there are also marked differences. Rural individuals and businesses are likely to be location bound, meaning they cannot just pick and move to wherever the college is. In the Urban environment with low unemployment, the likelihood business will hire a student away from pursuing their education is much higher. For these two main issues, LATI has developed our “Learn Where You Earn” methodology and established Business Partners Specialists. In our rural environment, LATI has seen the necessity to move to the online environment. However, hands-on technical education/training at a distance can be problematic. *Learn where you earn* is a set of tactics we employ to use a mix of online academics and onsite (either on campus or at an industry partner’s facility) in hybrid models to take education to our students. The business partner specialists are the key to partnering with industry to bridge the distance and resources gaps to support our students. They are fully versed in a variety of ways businesses can help students be successful, and fully versed on the return on investment for the business in supporting education. My staff and I are always willing to share best practices and talk through specific issues at any time with your educational, industry, or government stakeholders on this topic. We can be reached through www.lakeareatech.edu.

Lake Area Technical Institute publishes our graduate recruitment playbooks. These playbooks outline ideas for communities and businesses to attract graduates. In both environments, it is not just about the job for the newest generations entering our workforce – and the play books outline thoughts for how to capitalize on your strengths. But, there are exceptional colleges across the nation doing great things in career and technical education. Centers of Excellence in Career and Technical Education could serve as catalysts and advocates for best practices in the technical education realm. Although at the core they deliver the same broad service, “HIRE” education is a different focus and mindset than the traditional higher education system. For many, this change will not happen quickly.