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Testimony on Career and Technical Education in Southwestern Pennsylvania

My name is Briana Mihok, and I am the senior policy strategist at the University of Pittsburgh Institute of Politics. For those of you who are not familiar with the Institute, it is a neutral, nonpartisan organization that convenes elected officials, community and business leaders, and academics with the goal of addressing pressing public policy issues in Southwestern Pennsylvania and beyond. I appreciate the opportunity to speak to you today regarding the Institute's work in the area of career and technical education.

In 2011, the Institute of Politics Workforce Development Policy Committee released a status report making recommendations on the governance and funding of CTCs in Pennsylvania.

Focused primarily on state policy changes, these recommendations were as follows:

- Restructuring joint operating committees to include one member from each sending district and representation from companies that employ workers in high-priority occupations
- Fostering co-location, where possible, of CTCs with community colleges
- Moving to full-time comprehensive CTCs with enhanced academic accountability
- Requiring a competitive admissions process
- Increasing industry donations to bridge CTCs' funding gaps
- Enhancing tax credits for industry donations to CTCs
- Increasing industry sponsorship of facilities and programs.

In 2015, the Institute received a request from the community to revisit the issue. In conducting initial interviews for the subsequent report, the Institute found that misperceptions of career and technical education continue to persist. Little has changed in the state laws and regulations regarding governance and funding systems for CTCs around which the recommendations included in the first report were based. Nonetheless, a number of environmental factors are different. It is around these factors that we have shaped our report.

First, new career-related programming has developed across the region. In May 2015, the Institute held a forum that highlighted several of the many innovative new programs located within individual school districts. School districts such as South Fayette and Elizabeth Forward have made significant changes to their traditional K-12 curricula to introduce students to "maker" learning concepts and develop critical thinking skills. Other districts such as Chartiers Valley have chosen to adopt national career exploration programs such as Project Lead the Way, which offers a ready-made STEM- and problem-solving-based curriculum to schools across the country. Although many of these programs are too new to show results, Elizabeth Forward has already demonstrated a significant decline in their dropout rate, which they attribute in part to the engaging nature of the new curriculum.

Career and technical centers have also made strides in introducing new programming, encouraging dual enrollment and career pathways for their students, and crafting or participating

in articulation agreements with local post-secondary institutions. A study conducted by Columbia University in 2012 on the benefits of dual enrollment found that participants in the three year initiative were “more likely to graduate from high school, more likely to persist in post-secondary education,” and less likely to require remediation of basic skills upon entry into post-secondary education than their comparable peers who did not participate in dual enrollment.ⁱ

Some CTCs and CTE programs have also created career pathways to help students, parents, and others visualize the potential expected earnings as well as education required along a particular career path. For example, a career pathway offered for a student looking to study machine production at the Fayette County Career and Technical Institute demonstrates that a student graduating from this program can expect to earn \$31,060 as a tool and die maker or a machine tool operator, with proper industry certification. If they would like to move forward in their career and earn additional certification, they can become a CNC Controller/Programmer and expect to earn \$41,480. If they decide to pursue a four-year degree or beyond, they can become a mechanical or industrial engineer, with median earnings of \$73,470. Information like this could be extremely helpful to students and their parents as they begin to explore options for post-secondary education. This type of information can demonstrate that a path to a four-year degree might well include coursework at a CTC or career-based academy. In fact, a study of career academies out of California demonstrated that 57 percent of academy graduates completed the full set of courses required for admission to California State University of the University of California, compared with only 36 percent of graduates statewideⁱⁱ, meaning they needed no additional remediation to begin their post-secondary program.

Additionally, in the past five years, career and technical education has received greater attention from other sectors, including the administration, the legislature, businesses and workforce agencies, and the public at large. According to a 2014 PDE report, enrollment in CTE programs statewide decreased steadily from 2008-09 until 2011-12, and then showed an increase of over 1,000 students in the subsequent 2012-13 school year.ⁱⁱⁱ

To summarize, awareness is growing about the importance of career and technical education both to our future economy and to help ensure that all students in our Commonwealth have the opportunity to pursue a family-sustaining career. So, too, are programs developing across the region and the state, but in piecemeal fashion. The Institute’s recommendations, while still under development, will address the relevance and rigor of the programs that are developing as well as the concept that all students across the 10 counties of Southwestern Pennsylvania and beyond should have access to high-quality career and technical education that is aligned with local and state workforce needs.

In light of the above guiding principles, we would like to put forth the following policy options. The commonwealth should consider:

- Providing state financial and technical support for dual enrollment programs and the creation of articulation agreements between secondary and post-secondary schools. This is especially important for ensuring that equity exists across the Commonwealth, regardless of what CTC or school district in which a student is enrolled.
- Encouraging the development of additional career exploration opportunities through:

- Adoption of career pathways at the state or regional level
- Increased use of career pathway information as a marketing tool for parents, students, and members of the community.
- Increased use of job shadowing experiences and internships at the secondary level.

Career pathways for high priority industries have been created at the state level in Ohio. Each one-page front-and-back sheet provides a complete listing of courses required for high school students as well as what would be expected were the student to continue on to post-secondary training. On the reverse, the document demonstrates the potential earnings and required training for each job level along the pathway.

While Pennsylvania has similar information available on the Department of Education’s website as well as occasionally through individual schools, it would be beneficial to all students and parents if these documents were developed and distributed on a state- or region-wide basis.

- Encouraging the sharing of programming, curricula, space, and equipment across districts and CTCs. South Fayette and Elizabeth Forward school districts have already developed agreements that allow them to share their innovative programs both with the community and with other districts. The Commonwealth could incentivize these types of agreements through financial stipends to school districts that enter into such agreements or by providing technical assistance for the formation of these agreements. It would be inefficient for each district to build its own health sciences lab, for example, but to share those types of resources across districts and schools would ensure more equitable access to programming.
- Determining what role the state should play in recognizing and/or funding innovative career-based programming at traditional high schools. Currently, these programs are funded primarily through grants, which means that they are limited in terms of the possibility for expansion to other districts. Also, while on the positive side, the lack of state regulation in this area means the programs can be flexible and tailored to the needs of the individual district, this could also create tension between the traditional K-12 schools and the CTCs, especially if similar programming is offered at both, and the CTCs are subject to requirements and regulations from which the traditional high schools are exempt.

In summary, over the past five years, many districts and CTCs have demonstrated extraordinary vision and leadership in the creation of meaningful career exploration and career and technical education programming that is both interesting to students and aligned with the workforce needs of the region and the Commonwealth. However, these learning opportunities are limited across the region and the state and may not be benefitting the students who are most in need of these opportunities. Additional structure and support from the commonwealth would help level the playing field and increase opportunities for all students. Thank you.

ⁱ Hughes, Katherine L., Rodriguez, Olga, Edwards, Linsey, and Belfield, Clive. “Broadening the Benefits of Dual Enrollment: Reaching Underachieving and Underrepresented Students with Career-Focused Programs.” The James Irvine Foundation, July 2012.

ⁱⁱ Visher, Mary G. and Stern, David. “New Pathways to Careers and College: Examples, Evidence, and Prospects,”

ⁱⁱⁱ Pennsylvania Department of Education. “Pennsylvania Career and Technical Centers.” September 2014.