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DEPARTMENT OF EDUCATION

Supporting Career and Technical Education Students' Transition to College and Career

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333 Market Street
Harrisburg, PA 17126-0333
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Pennsylvania Department of Education
Bureau of Career and Technical Education
333 Market Street, 11th Floor
Harrisburg, PA 17126-0333

Voice: (717) 787-5530
Fax: (717) 783-6672
TTY: (717) 783-8445
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Introduction

In today's national discourse on how to improve student achievement and readiness for college and careers, career and technical education (CTE) is taking center stage in many of these conversations. In fact, during 2013 and 2014 alone, 5 states approved new policies or initiatives to promote and strengthen CTE.

Today's CTE integrates cutting-edge technical skills, authentic career experiences, and in-demand employability skills with rigorous academic coursework. As a result, CTE students are increasingly prepared for both college-level coursework and career entry, as well as possessing the critical thinking, communication, collaboration, and creativity skills that are vital to success in both postsecondary and employment settings.

While entering the workforce immediately after high school remains a viable option for many CTE students, data suggests that their lifetime earning potential increases if they were to obtain some postsecondary education and training. In fact, job-opening projections through 2020 indicate that thirty percent of occupations will require some college or a two-year degree, according to the Center for Education and the Workforce at Georgetown University. Furthermore, forty-six percent of all job openings in the United States from 2006 through 2016 will have sought to fill "middle skills" positions or those that require more education than a high school diploma but less than a bachelor's degree.

The Pennsylvania Department of Education's Bureau of Career and Technical Education, or BCTE, has worked diligently to ensure that its students are both college and career ready by developing well-designed and highly relevant programs of study (POS) aligned to the Pennsylvania Department of Labor and Industry High Priority Occupations list. As stated on the Pennsylvania Department of Education website,

Programs of Study incorporate elements of secondary and postsecondary education; and, include coherent and rigorous content aligned with challenging academic standards and relevant career and technical content in a coordinated, non-duplicative progression of courses that align secondary education with postsecondary education to adequately prepare students to succeed in postsecondary education. . . For each POS, a committee was established, which included statewide representation from business and industry, instructors and administrators from secondary and postsecondary education, and other interested parties. A blended list was developed from submissions of competency lists from career and technical education programs across the state. Then national competencies were included from sources such as Career and Technical Education Consortium of States (VTECS), Multistate Academic Vocational Curriculum Consortium (MAVCC) and Occupational Information Network (O*NET). ("The Development of Pennsylvania Programs of Study," para. 1 & 3)

Based on this guidance, Pennsylvania's POS have been designed to graduate students who are ready for college and career.

Still, for a student to make the transition from high school to college, much lies outside of the direct domain of a program of study. Research indicates that the process of successfully attending college involves multiple sequences of learning and taking action, including: selecting an area of interest for postsecondary study, learning about and visiting colleges that offer programs aligned with the area of interest, learning about the college application process, understanding and enrolling in high school courses that might be a prerequisite for college admissions, taking any required college entrance assessments, learning about and applying for financial aid, applying for admission to one or more schools, selecting from among schools for which admission was granted, taking an academic placement test, enrolling in classes, moving in (if necessary), and beginning to attend classes.

For many students, particularly for students who do not have a family member with college experience who is actively supporting and advising them, the transition from high school into college is not intuitive and can be overwhelming. Without knowledge and personal supports, many students may not get there on their own.

To help students make a successful transition, teachers, guidance counselors, and administrators at many Pennsylvania's career and technical centers (CTCs) are providing explicit and innovative supports that increase students' college and career awareness, help them navigate through the college application and admission process, and help them enter the workforce.

This report provides promising examples of these supports. The following sections include examples of the following types of supports:

- Preparing for College and Career: Events and Opportunities
- Encouraging Students to earn College Credits at the Career and Technical Center
- Offering Specialized Support from Guidance and Career Counselors
- Supporting Students with Special Needs

Preparing for College and Career: Events and Opportunities

Pennsylvania's CTCs provide students with college and career awareness and exploration through carefully planned events and opportunities. Local employers, workforce development agencies, and postsecondary institutions are often involved in these activities to help provide students and parents with a wide range of information and resources.

Informational Events

At Wallenpaupack High School, which offers students several CTE programs of study, conversations about college and career begin with freshmen students and their parents. In the past, attendance was low at college-planning events, and a fresh approach was needed. Administrators reasoned that most parents were aware of the importance of SAT scores; however, students often took the SAT late in their high school career. To give students and parents an earlier look at the high school courses and level of academic achievement needed to gain entry into competitive colleges, they decided to administer, at no cost to students, the PSAT (reading and math) to all students in the fall of their freshman year.

School administrators, however, hold the test results until January as an incentive to encourage parents and students to attend an evening College and Career Planning event. Parents who attend this event receive a one-page summary of their child's score along with identified strengths and weaknesses. The report also indicates where the child may obtain help to improve areas of weakness.

During the presentation, participants learn about high priority occupations, jobs of the future, and the costs associated with all postsecondary options. Assistant Superintendent Dr. Joann Hudak reports that the most powerful presentation slide depicts a spectrum of SAT scores that are required for acceptance into a range of four-year colleges. Parents are asked to compare those SAT scores to their child's PSAT scores; this often results in a few moments of "dead silence" as many students and parents realize there is a sizeable gap. The presentation, which Dr. Hudak says provides participants with a "reality check," continues by encouraging students to make appropriate choices in course selection over the next few years, choices that align to their college and career goal. Students with low PSAT scores who wish to attend selective four-year colleges, for example, are encouraged to take more rigorous courses, use tutoring opportunities, and commit more fully to their coursework.

The event has been highly successful from the start. Initially, 280 families out of a freshmen class of 325 students attended the first year and attendance has grown each year since.

College Awareness Activities

Upper Bucks Technical School Principal Tracy Hill and guidance counselor Morgan McCloskey organize an annual college fair for their students. The event is held during the school day and upper class students are required to attend.

Postsecondary institutions that maintain articulation agreements with the school, along with other local colleges, set up tables and talk to students individually and in small groups. A key element of this event is that students are given a “cheat sheet,” created by Ms. McCloskey, that directs them to the schools offering degrees and certificates in their current program of study. Schools offering Students Occupationally and Academically Ready (SOAR) articulation agreements (described later in this document) are also identified along with the number of credits students may earn. This information helps students make good use of their time while at the college fair.

In addition to this event, Bucks County Community College offers Upper Bucks Technical School students an annual informational presentation. At the conclusion of the presentation, students are invited to complete the college’s application with the support of staff members. As a follow-up to this session, the students are scheduled to take the community college entrance assessment together. Several months later, a representative from the community college visits the school to meet with registered students, answering more specific questions and addressing concerns. Moving forward, Upper Bucks Technical School is working with Bucks County Community College to offer the community college assessment at the CTC. According to Ms. Hill, these seemingly small supports provide much appreciated “red carpet treatment,” helping students make the college transition with peers.

Students at Lehigh Career and Technical Institute (LCTI) have the opportunity to visit Lehigh Carbon Community College (LCCC) classes that relate to their program of study. This opportunity, arranged by Ms. Grace Loeffler-Guldin, Supervisor of Student Services, gives students a better perspective on the coursework they will take if they pursue their program of study at college. While there, LCTI students are invited to complete LCCC’s registration application and take the required entrance assessment. Students may also opt to take the entrance assessment during school time at LCTI.

Internships and Job Shadows

Short-term internships and job shadowing opportunities offer CTE students invaluable insight into careers that are related to their program of study. During these experiences, students observe the workload and the environment of specific careers. They talk with employers and learn about the educational and career path that led to the employee’s current position. Through internships and job shadowing, many students confirm their career interest, and, just as valuably, some students realize what career paths are not the right fit for them.

During the 2013-2014 school year, LCTI instituted the Rotational Internship Program within the manufacturing sector to address the shortage of skilled workers, specifically in electromechanical and mechatronics. This innovative program was entirely driven by employer B Braun Medical and was designed in partnership with LCTI and the Lehigh Valley Workforce Investment Board. Unlike cooperative learning experiences in which students are placed in one job for a semester or longer, the Rotational Internship Program requires students to work in several different manufacturing environments. However, like cooperative learning experiences, students in the Rotational Internship are paid. According to Ms. Jan Klevis, Supervisor of LCTI's Adult Education, the program has been very successful as measured by student and employer feedback, student placement after graduation, and student and mentor engagement. During the 2014-2015 school year, the program was expanded to include two additional Lehigh Valley career and technical centers and additional employers. In addition, the Lehigh Valley Workforce Investment Board is providing partial funding through a PA Jobs1st grant to offset employer costs.

Academic Readiness Supports

David T. Conley (2012) defines a college and career ready student as one who can “qualify for and succeed in entry-level, credit-bearing college courses leading to a baccalaureate or certificate, or career pathway-oriented training programs without the need for remedial or developmental coursework.”

Statistically, students who are required to take one or more “developmental” or remedial courses when they enter postsecondary education are more likely to be discouraged and drop out of college. This is particularly true when they struggle with college-level mathematics, and do not succeed in the development math course.

To help students who are likely to need more support with core academic classes and qualifying for credit-bearing courses, CTCs often have a plan of action in place.

At Northern Westmoreland CTC, for example, students in need of retaking core academic classes for graduation are eligible to receive reimbursement for the cost of up to two summer school or other make-up courses. According to Administrative Director Kurt Kiefer, the goal of this program, which began during the 2010-2011 school year, is designed to prevent students from withdrawing from the CTC in order to make up academic credits. He explained, "Our sending schools have high graduation rates, but we were losing students from the CTC. Students weren't completing their CTE programs and obtaining their career tech certificates because they had to make up academic classes." With the support of the CTC's advisory board and Joint Operating Committees, administrators allocate approximately \$4,000 per year from the general budget for this program. In order to be reimbursed, students must pass the courses and remain enrolled at the CTC. On average, twenty students (approximately fifteen percent of the CTC's students) take advantage of this opportunity each year.

Northern Westmoreland CTC also helps students become academically ready by offering the WIN Career Readiness Software program, which includes both a college and a career readiness module. Students are required to complete the career readiness module consisting of Applied Math, Reading for Information, and Locating Information. The program is web-based and may be accessed from school or home. Students are encouraged to complete the College Readiness module as well, and for students who complete both modules, a Career Readiness Certificate is added to their career portfolio.

Lehigh Career and Technical Institute recently revamped the schedule of its Academic Center, an option for students who wish to take all of their high school courses, both academic and technical, at LCTI. The fifth period is a time designated for special project work or for students to receive additional academic support. Students may request support or may be referred by an academic teacher.

Encouraging Students to Earn College Credits at the Career and Technical Center

For many CTE students, the transition to college and career begins by earning postsecondary credits while still in high school. Several options are available to students including dual enrollment and articulated credits.

Dual Enrollment

Through dual enrollment courses, students earn high school credit and college credit simultaneously. Students take college courses during school hours at the career and technical center or on the college campus.

The benefits of dual enrollment are well documented; a report prepared by Jennifer Dounay Zinth for the Education Commission of the States (2014) shares that students who take dual enrollment classes are more likely than their peers to finish high school, enroll in college, and finish college. Further, students who take dual enrollment courses while in high school are less likely to require remedial coursework in college.

Other benefits, according to students who took dual enrollment courses and are now in college, include having the confidence and ability to

- navigate a college campus environment and procedures such as registration and course selection.
- select a college major.
- use time management and study skills needed to successfully complete college-level work.

Classes taught at the CTC are sometimes referred to as “embedded dual enrollment” and in some cases are taught by a CTC instructor who has been trained to present the colleges’ curricula. Dual enrollment college credits appear on students’ high school and college transcripts and are usually transferable to other

postsecondary institutions. Tuition for dual enrollment college credits is often reduced or even waived for high school students.

Many of Pennsylvania's career and technical centers offer students dual enrollment options. York County School of Technology, for example, provides the following information in their 2014-2015 course catalog, which may be retrieved at the school's website.

At the current time, the following courses are offered through HACC's [Harrisburg Area Community College] College in the High School (CHS) Program. These courses are taught during the school day as part of the technical program by a high school teacher/HACC adjunct. Students may earn college credits by enrolling in the HACC CHS Program through their technical area.

- Introduction to Allied Health (3 credits)
- Medical Terminology (3 credits)
- Introduction to Horticulture (3 credits)
- Blueprint Reading; Metalworking (2 credits)
- Geometric Tolerance (1 credit)
- Introduction to Metalworking (1 credit)
- Basic Power Tools (1 credit)

Source: (<http://www.ytech.edu/common/pages/DisplayFile.aspx?itemId=20617319>)

The Berks County Technical Academy is an innovative high school-to-college pathway launched in 2013. Partners include Reading Area Community College (RACC), Berks Career and Technology Center (BCTC), and Reading Muhlenberg Career and Technology (RMCTC). Through dual enrollment classes, students begin a pathway while enrolled in the CTC; after high school graduation, students may seamlessly transition into RACC's two-year degree programs. Presently, the Technical Academy offers three pathways: Healthcare, Engineering Technology, and Business and Information Technology. The Technical Academy partnership further extends to Bloomsburg University, where students can complete a bachelor's degree without leaving the RACC campus.

A similar program is offered to students at Lehigh Career and Technical Institute, which shares a campus with Lehigh Carbon Community College (LCCC). LCTI junior and senior students may take dual enrollment classes that work toward an associate in applied science (AAS) degree, associate in science (AS) degree or associate in arts (AA) degree. Upon completing their associate's degree, students receive a 60-credit block transfer into Bloomsburg University's Technical Leadership program, avoiding the loss of credits that typically limits advancement of students in AAS degree programs. The BAS degree is delivered through courses taught on the LCCC campus as well as online. This seamless and affordable pathway, starting as early as students' junior year of high school, allows participants to earn a bachelor degree

without leaving the LCTI/LCCC campus.

LCTI also offers a competitive program for seniors interested in health-related professions. Students accepted into the Emerging Health program earn six college credits at either LCCC or Penn State Lehigh Valley; courses are taught by college instructors and include only LCTI Emerging Health students. Career exploration is an important component of the program as students engage in job shadowing at area hospitals and attend lectures by local leaders in health care throughout the year. Students enrolled in this rigorous program often report that the health care profession in which they were initially interested changes as a result of the rich career exploration experiences they are given.

Chester County Technical College High Schools (TCHS) developed the *Link Catalog* detailing the various ways in which their students can earn college credit. The following quotes attributed to recent graduates exemplify the way in which the catalog both informs and inspires current students to earn college credits:

“I graduated high school with 26 college credits, knocking out my entire first semester of nursing school. This was a cost-savings of close to \$100,000!”

“When I stepped into my Drexel University classroom, I was already 10 steps ahead of my classmates. Earning those 12 college credits saved time and nearly \$5,000 in tuition.”

The catalog is used during College Opportunity Night. Students and parents who attend these events may also meet and talk with postsecondary representatives; students are invited to complete their college application on the spot with the help of postsecondary staff. Earning early college credits is even easier for TCHS students since Delaware County Community College recently implemented a satellite location at each of the three Chester County Technical College High Schools. In addition to location convenience, reduced tuition rates and waived fees offer students even more incentive to enroll.

Source: (<http://www.cciu.org/Page/2032>.)

Articulated Credits

Students Occupationally and Academically Ready, or SOAR, is a BCTE initiative ensuring that every Pennsylvania approved program of study is aligned to a postsecondary program. Through SOAR, high school students may be eligible to articulate some of their technical education coursework to postsecondary credits, thus reducing the need to duplicate coursework already successfully taken at the CTC. College credits earned through SOAR articulation agreements are tuition-free. As stated on the Pennsylvania Department of Education website (<http://www.education.pa.gov>),

SOAR is built on programs of study which incorporate elements of secondary

and postsecondary education and include coherent and rigorous content aligned with challenging academic standards and relevant career and technical content. These career and technical programs of study includes a statewide articulation agreement partnership between secondary schools and postsecondary institutions. Benefits of SOAR:

- Saving Money on College Tuition
- Saving Time by Shortening College Attendance
- Getting on the Right Career Pathway
- Entering the Job Market Ready
- Getting a Consistent Education (“Programs of Study [POS] Mission of SOAR,” para. 3 & 5)

Students, school personnel and parents may access College Transfer (<http://www.collegetransfer.net>), a free website that provides detailed information regarding the program of study and the postsecondary institutions that have partnered with the state’s SOAR initiative. To earn articulated credits, students must meet specific and rigorous criteria including the successful completion of all program of study competency tasks.

With no-cost college credits on the table, communicating the SOAR initiative to students, staff, parents, and business partners is important; CTCs across the state have developed innovative and effective ways to ensure that students take advantage of this initiative. Many CTCs, for example, provide an annual schoolwide SOAR presentation to students and staff. Parents receive information through the school’s website and during open house and college and career planning events.

In spring of their senior year, students eligible for SOAR articulated credits at Lehigh Career and Technical Institute and Upper Bucks County Technical School receive a personalized SOAR folder prepared by their guidance counselor and containing everything needed to articulate their CTE coursework to postsecondary credits. Folders include a list of postsecondary institutions that offer the articulation for their program of study, a checklist of required steps, and the SOAR coversheet required for submission at the postsecondary school.

Delaware Valley Technical High School created a narrated PowerPoint presentation explaining SOAR; it is now also accessible on the PDE website. This presentation helps students, new CTC teachers, parents, and community members learn about the initiative. PDE website visitors may also view and download an informative SOAR flyer and brochure.

Chester County Technical College High Schools (TCHS) developed a SOAR lesson plan that is delivered to students at each of the school’s three campuses. The lesson includes the benefits and qualifications of the SOAR initiative along with the procedures for obtaining the articulated credits. In addition, TCHS places an advertisement in its local newspaper announcing and congratulating SOAR eligible students. TCHS’s website, like many of Pennsylvania’s CTCs’ websites, offers a

page dedicated SOAR information and procedures.

Offering Specialized Support from Guidance and Career Counselors

Under 22 Pa. Code Chapter 339, all school districts are required to have a K-12 School Counseling Plan (22 Pa. Code §339.31). Information and resources related to this plan may be found by searching for keywords "K-12 counseling plan" on the Pennsylvania Career Education and Work Standards website at www.pacareerstandards.com.

While each K-12 School Counseling Plan is developed and implemented at the individual school districts that partner with the CTC, most CTCs employ at least one guidance counselor who provides up-to-date college and career information to its students and their parents. In addition to one-on-one student support, guidance counselors often play a key role in organizing college and career fairs, college visits, and guest speakers. They may also offer student workshops covering topics such as completing college applications, financial aid, resume writing, and interviewing skills. Guidance counselors in Pennsylvania CTCs often utilize online career assessment and exploration tools with staff, students, and parents. Two of the most commonly used are www.pacareerstandards.com and www.pacareerzone.com. Both of these sites offer no-cost career development research and classroom resources that assist in implementing the Career Education and Work Standards.

In addition, some CTCs employ or partner with support staff from other organizations whose sole focus is to increase students' college and career awareness. For example, students at LCTI have a regular opportunity to meet with a representative from Lehigh Carbon Community College (LCCC) who visits LCTI one day each week throughout the entire school year. Each week, the LCCC representative sets up an information table in the cafeteria during lunchtime and meets with students in the guidance office. She also provides individual college-related counseling, including information regarding financial aid, articulated credits, and the application process.

Through a grant opportunity provided by the Claude Worthington Benedum Foundation (www.benedum.org), students at Greene County Career and Technical Center may receive additional resources to help them successfully transition from school to postsecondary education. A grant-funded resource person meets with students two days per week, helping them complete postsecondary applications, participate in field trips to local colleges and universities, secure financial aid through grant applications, and keep on track to completing their postsecondary career plans. Greene County Career and Technical Center staff members select students from programs where postsecondary education is most advantageous for job seekers, such as the health assisting program, computer information technology, and emergency protective services. Additional information regarding the Benedum Foundation project is described later in this report.

Many of Pennsylvania's career and technical centers' school websites offer valuable resources for students and parents. Often this is found by navigating to the guidance department page. One resource that is commonly shared is a link to the website *Getting Them There: Easing the College Transition* at <http://gettingthemthere.com>. This informative website, funded by Penn College and provided by Outreach for K-12: Pennsylvania College of Technology, defines its purpose as the following:

Pennsylvania School Counselors are asked daily to help students get ready for college. Helping students in this multi-year college transition gets more complicated each year.

This website focuses on easing the Pennsylvania school counselor's role in getting students to college, providing free downloadable resources that can be modified to meet your needs. Students, parents and other educators will also find the website invaluable as a single source of resources and links to help get Pennsylvania students to postsecondary education.

Supporting Students with Special Needs

Career and technical education in Pennsylvania is designed for all students, and many special education students attend and achieve great success in CTE programs with minimal accommodations. Contrary to some perceptions, having an identified disability does not mean a student lacks the general intelligence or ability to earn a high school diploma and participate in postsecondary education and training; in many cases, it means they need special supports, strategies or accommodations to succeed in spite of the disability. Every identified special education student in the commonwealth has an Individualized Education Plan (IEP) that includes the accommodations the student is entitled to receive to help them succeed in the high school curriculum. Career and technical educators are aware of, and adhere to, students' IEPs. In addition to accommodations within the general CTE programs, some special services and projects are designed to especially benefit special education students.

Students at Upper Bucks Technical School may participate in the afterschool TechBrige program offered by Henkels and McCoy, a local engineering firm. Henkels and McCoy offers this program to low income and/or special needs students.

The program, school administrators find, is a particularly good fit for many of their special education students. TechBridge works on strengthening senior students' academic skills, specifically math and reading. Students also work on career-related skills and activities including interviewing, resume writing, and job searching. Students are able to earn several industry certifications, including from the federal government Occupation Safety and Health Administration, helping them to be more work ready.

A TechBridge-sponsored teacher meets students after school twice a week for the entire school year. In addition to teaching college and career readiness skills, the teacher helps students complete college applications. At the end of the program, students are awarded a computer, several opportunities to earn \$25 gift cards (for completion of different stages of the program), and possibly a job offer or college acceptance. The TechBridge teacher follows these seniors for one year after the completion of the program to ensure they receive ongoing support.

Lehigh Career and Technical Institute offers five Service Occupations Cluster programs for students who need a small group setting in order to be successful. Each program is designed to help students make the transition from basic, entry-level skill development to more advanced technical training or community college courses that prepare them for the workforce. Presentation of classroom material is provided at a reduced pace and with additional repetition; teachers' assistants provide ongoing support and attention. Intensive support for math and reading as well as for mastering technical skill competencies are provided to students on an individual basis. New students are given a skill screening to determine their readiness level and interests. This information is shared at the students' IEP meeting if applicable. Students are then encouraged to rotate among three of the five SOC programs before selecting a specialty. The five SOC program areas are Building Trades Maintenance, Food Service, Hospitality Service, Indoor/Outdoor Maintenance and Landscaping, and Material Handling.

Intermediate Unit One (intermediate units are regional education service agencies that provide special supports, services, and professional development to school districts) is concluding a two-year Career and College Ready Transition Project that provides exploration experiences for students entering career and technical education and successful transition experiences for students leaving CTE. The project, funded through the Benedum Foundation, includes professional development for CTE staff, computer-based remediation and college and career readiness instruction for students, job-embedded professional development support through transition coaches, school-based support for potential CTE students and families, and community involvement in CTE transitions. Three career and technical centers within Intermediate Unit One participated in the Career and College Ready Transition Project for both years.

The Director of Intermediate Unit One's Adult, Nonpublic, and English as a Second Language Education Services shared the primary goals of the project:

- Prepare and successfully transition more CTE students into postsecondary degree and credentialing programs.
- Provide job-embedding professional development coaching for CTE staff.
- Model student postsecondary transition activities.
- Provide potential students and families introductory experiences to career possibilities in the various programs of study offered at local career and technical centers.

Highlights from the project, as described by the director, include the following:

- Transition plans developed for students in grade eleven and twelve.
- Coaching support for CTE instructors as they prepare lessons to provide support for skills needed on the Keystone Exams (required state academic assessments for high school students), as well as entrance exam for postsecondary programs.
- Career Education and Work Standards lessons addressing postsecondary transition topics including how to select a postsecondary school/program, SAT/ACT testing, the application process, financial aid, placement tests, and employability skills.
- A selection of remediation software including the A+Advancer and Aztec.
- A selection of college and career planning programs including Career Cruising and Naviance.
- Student and teacher attendance at the annual Reality Fair.
- Community awareness regarding postsecondary opportunities following graduation from a CTC.
- Referral to the Bridge Program developed with local postsecondary schools.

Data from the project's first year two years (2013-2015) is summarized in the following chart.

Career and Technical Center	2013-2014			2014-2015		
	Number of Participants Graduating	Number Transition to Postsecondary Education	Percentage	Number of Participants Graduating	Number Transition to Postsecondary Education	Percentage
Connellsville Area Career and Technical Center	25	9	36%	140	35	25%
Fayette County Career and Technical Institute	21	11	67%	20	17	85%
Greene County Career and Technology Center	11	6	55%	27	9	33%

Conclusion

The U.S. economy depends on a capable and skilled workforce, and CTEs doing its part to develop a highly-trained workforce. With the career outlook and lifetime earning potential much brighter for students who earn postsecondary industry certification, a two-year degree, or a four-year degree, career and technical educators are working to ensure that students graduate ready for both college and career.

Pennsylvania's CTCs have responded to the changing economy and workplace. At the state level, much has been done to increase the technical skill and academic rigor in each of the highly relevant programs of study. At career and technical centers, administrators and staff have ramped up their understanding of college and career readiness and the transitional supports they provide to students and parents. Career and technical education, unlike the vocational education of years past, aims to prepare students for a range of life choices including postsecondary education and various career paths.

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