

Consolidated Annual Report, Program Year 2017 - 2018 Pennsylvania

Step 3: Use of Funds: Part A

1. During the reporting year, did your state use Perkins funds to develop valid and reliable assessments of technical skills?

Yes

Pennsylvania developed and uses customized assessments aligned to the Pennsylvania-developed Programs of Study (POS). Currently we have 24 customized assessments. The methodology used by Pennsylvania to develop valid and reliable assessments of technical skills includes the Nedelsky Method and Angoff Method.

The goal is to have a secondary and postsecondary aligned assessment for each Program of Study. Currently there are 43 completed POS. Pennsylvania developed statewide committees to examine the current NOCTI assessment that is aligned to the secondary portion of the POS. The assessment alignment effort identified national NOCTI assessments that are not aligned to the POS. Pennsylvania worked with NOCTI to customize assessments that align. There were 24 customized tests being utilized in 2017-18, including a Career Education and Work test.

The Bureau of Career and Technical Education has been evaluating enrollments and CIPs to maximize the number of students enrolled in CTE POS aligned to end-of-program testing. At this point, only 15% of CIPS do not have a test alignment. At the secondary level, Pennsylvania has aligned 64 of 75 CIP codes with skill attainment end-of-program tests. These tests are provided by NOCTI and the National Institute of Metalworking Skills (NIMS). The CIPS aligned with NOCTI and NIMS tests include 98% of CTE enrollees.

NOCTI is the assessment provider for Programs of Study customized tests. Study Guides and Instructor Prep Packs are available for the following customized assessments:

Administrative Assistant

Agricultural Production Operations

Applied Horticulture

Automotive Mechanics Technology

Building/Property Maintenance

Career Education and Work Standards

Child Care and Support Services Management

Commercial and Advertising Art

Communication Technologies

Computer Systems Networking

Computer Technology/Computer Systems

Cosmetology/Cosmetologist

Drafting and Design Technology

Electrical Power and Transmission Installers

Electromechanical Engineering Technology

Engineering Technologies/Technicians

Heavy Equipment

Homeland Security

HVAC Maintenance Technology

Management Information Systems

Mason/Masonry

Plumbing Technology/Plumber

Sales, Distribution and Marketing Operations

Veterinary Assistant.

At the postsecondary level research has determined that GPA is a valid and reliable methodology for assessing skill attainment, so no further action is required.

2. During the reporting year, did your state use Perkins funds to develop or enhance data systems to collect and analyze data on secondary and postsecondary academic and employment outcomes?

Yes

For the 2017-18 data collection, the Department continued to use the Data Quality Engine (DQE) that was brought online during 2014-15. Perkins funds were not used to develop or enhance the data systems during the 2017-18 program year.

Annually the Department reviews the data collection system against the data requirements. Changes to the system were minimal such as updates to the industry certification list; therefore, significant increases in the use of funds to develop or enhance data systems to collect and analyze data were not made during the 2017-18 program year.

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Step 3: Use of Funds: Part B

1. During the reporting year, how did your state assess the career and technical education programs funded under Perkins IV?

The evaluation methodology includes both qualitative and quantitative methods. Programs are evaluated based on Perkins accountability measures, which also are used by Perkins recipients to determine effectiveness of their programs. The accountability measures are broken into the special populations categories, which include Nontraditional, Displaced Homemaker, Economic Disadvantaged, Individual with Disability, Limited English Proficiency, and Single Parents. The evaluation occurs annually and Department staff analyzes each Perkins recipient's impact on each of the special populations categories including meeting locally negotiated levels of performance.

As part of the annual local plan submission, each recipient is required to address special population's student academic performance, technical skill attainment, access to high-skill, high wage, high-demand education and training. The recipients indicate how their use of funds assists students with individual education plans and accommodates English Language Learners and those students who are economically disadvantaged. Staff then ensures each Perkins recipient's local plan addresses the areas of need.

Each Perkins recipient must annually submit a local plan, which requires each recipient to examine their school wide performance indicators and perform a root cause analysis of the indicators where they are not meeting negotiated levels. During the review of the indicators, the recipient considers action items and funding requests to ensure they address performance improvement.

For state program approval, each Perkins recipient's performance on accountability measures is also reviewed at the entity and program level. This review and analysis ensure the Perkins recipient is meeting the targets and allows the recipient to ensure the needs of each special populations category are being met. This method also allows the Department to determine if it needs to direct resources to address a category of special population to ensure all special populations' needs are being met.

The Department works with Pennsylvania Department of Labor and Industry in the identification of High Priority Occupations (HPO). Each Program of Study provides students the opportunity to prepare for employment in an HPO.

The Pennsylvania Department of Education visits recipients to ensure compliance with federal and state regulations. The regulations outline the expected standards of development, admission, and operation of quality career and technical education programs. The qualitative review ensures the Perkins recipients have designed the CTE programs to enable the special populations categories to enroll without discrimination and to prepare for further education and training in occupations that are aligned to Pennsylvania industry sectors. The industry sectors are those that are high skill and lead to family sustaining wages. The annual local plan submission also requires submission of assurance documentation and program performance report summary, specifically looking at Program of Study implementation and student pursuit of further education, training or employment in high priority occupations.

Each CTE program is required to have an advisory committee comprised of business, community, and workforce. The Occupational Advisory Committee conducts a program evaluation twice a year. Suggestions are considered and used to evaluate each program for performance improvement.

2. During the reporting year, how did your state develop, approve, or expand the use of technology in career and technical education?

For 2017-18, the Bureau of Career and Technical Education approved competitive equipment grants totaling \$1.1M in state funds. The funds expanded the use of technology in CTE programs. The focus of the grant was on increasing academic proficiency, technical skill attainment, and increased alignment of CTE programs to industry certifications. Secondary and postsecondary Perkins recipients also used their local Perkins allocation to purchase state-of-the-art equipment to support student learning in CTE programs. Each recipient addresses academic integration with technical course content and alignment to high priority occupations as well as a description of how the instructors will receive training on the equipment.

Forty-seven secondary schools submitted equipment grant applications. The total amount requested was \$1,593,743. The amount of funds available was \$1,200,000. Equipment grants enable recipients to purchase equipment that will be used for secondary instructional purposes in approved career and technical education programs. The educational programs must be aligned with Pennsylvania's high-growth or high demand career areas. Programs must also be aligned to industry certifications and validated industry standards. Each grant requires a match, one state dollar for every local dollar. Each grant application also provided a letter of support from the Workforce Development Board.

The eight-member review team received training on reviewing and evaluating the grant applications. The reviewers completed the evaluation on January 23, 2018 and recommendations were forwarded for approval. Schools were notified of grant awards on February 26, 2018.

The Pennsylvania Workforce and Development Association (PWDA) represents the regional workforce investment boards (WIB). The Bureau supports the annual PWDA Employment, Training and Education Conference. The Education Workforce Leadership Award was given in conjunction with the 2018 Pennsylvania Workforce and Development Association's Annual Conference on May 16-18, 2018. Each year, the PDE/BCTE selects an educational partnership to receive the Education Workforce Leadership Award. Eleven schools offering career and technical education programs nominated an educational partnership which has contributed to the growth and refinement of an operating career and technical education program in their school.

This year the PDE/BCTE 2018 Education Workforce Leadership Award was presented on May 16, 2018, to the Franklin County Career & Technology Center of Chambersburg, PA and Volvo Construction Equipment Operations located in Shippensburg, PA for an outstanding educational/industry partnership in the medium/heavy vehicle and truck technology and vehicle maintenance and repair technology programs.

After 15 hours of classroom instruction in Safety and Volvo Processes, students in both the Diesel Technology and Agricultural Mechanics programs move into the Volvo Room for an additional 25 hours of practical experience learning how to disassemble and assemble Volvo product. The FCCTC instructors, trained in Volvo processes, conduct the training periodically over a three- to four-week period. This instruction is considered "value-added" for the students, going beyond the normal program of study requirements offered for each program. Upon completion of the Volvo program, students who score 85% or higher on a final assessment earn a Mechanical Assembly Training Certificate from Volvo. This certificate will become a permanent part of the student portfolio and will allow FCCTC secondary students to stand apart in the future from other applicants who apply for jobs at Volvo.

The Department sits on the Pennsylvania Apprenticeship and Training Council. This appointment allows the Department to discuss programs of study and connections to registered apprenticeship programs. There is continued discussion on expanding apprenticeship programs by connecting the apprenticeship programs to secondary and postsecondary CTE education providers. There is an interest in expanding apprenticeship opportunities for Pennsylvania youth with a particular interest in establishing pre-apprenticeship programs at the secondary level.

Registered Apprenticeship programs are a written plan designed to move an apprentice from a low or no skill entry-level position to full occupational proficiency. These programs must meet parameters established under the National Apprenticeship Act that are designed to protect the welfare of the apprentice. A Registered Apprenticeship program is sponsored by an individual business or an employer association and may be partnered with a labor organization through a collective bargaining agreement. Upon finishing the training program, an apprentice earns a "Completion of Registered Apprenticeship" certificate, an industry issued, nationally recognized credential that validates proficiency in an apprenticeable occupation. Further information on registered apprenticeship programs can be found at <https://www.doleta.gov/oa/apprenticeship.cfm>.

3. During the reporting year, what professional development programs did your state offer, including providing comprehensive professional development (including initial teacher preparation) for career and technical education teachers, faculty, administrators, and career guidance and academic counselors at the secondary and postsecondary levels? On what topics?

The Department continues its partnership with the Pennsylvania Association of Career and Technical Administrators (PACTA). The partnership includes the Department's support and input into professional development that leads to viable professional development and technical assistance for instructors and administrators in CTE settings. PACTA representatives also serve on the Bureau's strategic planning committee and assist in identifying action steps the Bureau, with PACTA's assistance, can take to improve student academic and technical achievement, increase business engagement, develop K-12 pathways, serve special populations students, address academic and technical proficiency, and expand career development.

The Department has developed and implemented CTE teacher and administrator certification programs through contractual agreements with three state universities. Each university (Indiana University of Pennsylvania, The Pennsylvania State University, and Temple University) operates a Professional Personnel Development Center to focus on the CTE teacher and administrator certifications. During 2017-18, the Centers provided pre-service and in-service professional personnel development services for career and technical educators in the respective regions of the Commonwealth. Each university insures the certification programs are based on research and cover topics including curriculum development, integration, instructional practices, parental and community involvement, PDE initiatives, and current trends in education.

All teachers and administrators must hold either an instructional or vocational instructional certification in order to be employed in a secondary school entity. State standards exist for teacher preparation programs and the teacher preparation programs must align to state standards and ensure the certification programs meet state statutes or regulations. The three Professional Personnel Development Centers prepare CTE teachers and administrators and recommend them to the Department for certifications.

In all three regions of the state, Center staff meetings were held regularly to share "notes from the field" and discuss topics of interest to the school. Also, professional development experiences were developed on the basis of a comprehensive needs assessment with input from the following sources:

1. Advisory groups made up of volunteers from the group for which the experience is intended.
2. Evaluative data collected from previous participants in similar activities.

Professional development activities included:

1. Opportunities to acquire new knowledge and skills related to the instructors' occupational area so they are able to provide dynamic, cutting-edge CTE instruction.
2. Discussions related to educational delivery methods and instructional techniques.
3. Resources and current information on PDE-BCTE initiatives.
4. Collaborations and networking opportunities with other education professionals.

In addition, career and technical educators are provided with technical training on how to access, select, develop, and implement curricula materials that support statewide programs of study and rigorous challenging programs; career pathways; scope and sequence of courses, in accordance with Chapter 339; industry standards; articulation agreements; and other state and federal mandates.

The professional development activities are designed to enhance the knowledge, academic integration proficiency, and skills or capabilities of career and technical instructors. For example, the following objectives were important in determining professional development programming:

1. Engage the teacher-learner, rather than rely on PowerPoint presentations.
2. When possible, conduct on-going group activities, rather than stand-alone workshops.
3. Create events that meet the needs of all teachers, including incumbents.
4. Promote teacher involvement in Domain 4 (Professional Responsibilities) of the PA Framework for Effective Educators.
5. Complement, but not duplicate, PDE BCTE initiatives and objectives of the Technical Assistance Program (TAP) or the Integrated Learning Conference.

The development of the Student Learning Objectives (SLO) for Career and Technical Education (CTE) teachers began in February 2014. SLO development and implementation continue as important ingredients in the evaluation of career and technical education personnel. Creation, development, and ongoing implementation of SLOs are taught by the three Professional Personnel Development Centers. New teachers are well-versed in all aspects of SLOs by the time they have gained their initial vocational certificate. The SLOs are a mandated component of the Educator Effectiveness system.

The Pennsylvania Department of Education, Bureau of Career and Technical Education, conducts the annual Integrated Learning Conference: The School to Career Connection. This conference highlights academic and technical integration strategies.

The Pennsylvania Department of Education, Bureau of Career and Technical Education conducted the 26th annual conference on November 8-10, 2017 at the Penn Stater Hotel and Conference Center in State College, PA. The conference was designed to share successful strategies that encourage the implementation of educational initiatives that enhance learning opportunities for all students. Over 75 concurrent sessions, three pre-conference workshops, and a variety of meetings and professional development activities were scheduled during the conference.

Over 500 participants attended, including instructors, administrators, counselors, postsecondary partners, and exhibitors. Having classroom instructors and other educators from the field as presenters contributed to the conference's success. These presenters provide instructional strategies and showcase best practices of career and technical education programs that improve the academic and technical skills of students through the integration of academics with career and technical education.

The conference program included four strands of specific educational topics in the areas of:

Programs of Study

Special populations

Classroom performance

Career development and counseling

4. During the reporting year, how did your state provide preparation for non-traditional fields in current and emerging professions, and other activities that expose students, including special populations, to high skill, high wage occupations?

Technical assistance was offered to a pilot group of schools that received sanctions letters in June 2017 related to their nontraditional performance indicators. The Nontraditional Technical Assistance Pilot Program provided on-going, individualized, on-site professional development to a small group of Perkins sanctioned schools. Twenty applications were received from schools interested in being a part of the project for the 2017-18 school year. Ten schools were selected based on their apparent interest in the project and BCTE's desire to have a representative sample of both secondary and postsecondary schools. Morrell Consulting visited with each of the selected schools to learn more about their challenges and facilitate solutions that will better meet the specific needs of each school.

Pilot schools received: customized services to help identify, collect, and analyze data; strategic-level process improvement ideas and tools; surveys and program reviews; and professional development or programmatic elements to help them meet their targets for one or both nontraditional indicators. Results of this pilot will be tracked to learn more about what is working well and how BCTE can provide more effective technical assistance to all schools striving to improve their nontraditional indicator performance.

5. During the reporting year, how did your state provide support for programs for special populations that lead to high skill, high wage and high demand occupations?

The process developed in Pennsylvania includes the annual evaluation of CTE programs, regional meetings with CTE Administrators and Perkins postsecondary representatives. Annually, each recipient is required to address student academic performance, technical skill attainment, and access to high-skill, high wage, high-demand education and training. All recipients retain documentation related to specific questions in sub-section 124(b)1, of PDE/BCTE's Perkins on-line Local Plan applications. The recipients utilize staff positions, equipment purchases, and professional development for teachers and para-professionals to assist all students, including special populations students.

BCTE supports the annual conference conducted by the Pennsylvania Association of Career and Technical Education Special Populations (PACTESP). The purpose of the conference is to provide professional development to CTE and regular education personnel to increase and align support and services to special populations students. Sessions are designed for secondary and postsecondary settings. BCTE also provides a pre-conference workshop to this conference which annually focuses on supporting special populations students so that they can be successful in their career and technical education programs and future employment. PACTESP holds an annual conference on Perkins IV special populations' issues. BCTE provides updates including updates on high priority occupations and the relationship to CTE secondary and adult programs.

BCTE continues to work with the Pennsylvania Association of Career and Technical Administrators to develop and offer targeted technical assistance that is focused on improving the performance indicators associated with special populations, specifically nontraditional students and students with disabilities. The technical assistance is designed for administrators with CTE programs and assists them in examining local data to determine gaps in performance of special populations' categories.

BCTE continues to sit on the State Leadership Transition Committee. An interagency MOU exists with participating state agencies in cooperation with the Bureau of Career and Technical Education and the Bureau of Special Education. The Transition Committee continues to work with the Local Transition Coordinating Councils (LTCC) to strengthen the councils. There are 70 LTCC across Pennsylvania. The councils hold interagency meetings to identify potential supports and services for transitioning students.

At the Integrated Learning Conference, a 3-hour session - Highly Effective Practices in Nontraditional Programming and Outreach – was presented to 90 people. The presenter shared information gleaned from numerous conversations with schools across the state about their programs that are effective in enrolling nontraditional students. Three schools were part of the presentation- Lehigh CTI, Philadelphia SD, and Delaware County CC. Twenty-two other schools' effective practices were created using the 'Program Profiles' format developed by Morrell Consulting. A total of 29 'Program Profiles' from 22 schools were developed. The goal was to provide tools faculty and administrators can use to recruit and sustain to graduation students that are underrepresented by gender (nontraditional) in career and technical education programs in both secondary and post-secondary institutions.

Topics discussed included:

Creating a climate of classroom inclusion and normalizing experiential learning to engage and empower students and improve outcomes for all.

Creating an equitable learning environment to improve student outcomes-- 3 Perkins schools that are meeting indicators shared some of their successful strategies for nontraditional recruitment and completion.

Crafting school-specific strategies and operations that build, revise, and expand on current efforts to attract and retain non-traditional students.

6. During the reporting year, how did your state offer technical assistance for eligible recipients?

The Department continues to collect best practices and post these on its website. The Department also worked with the Pennsylvania Association of Career and Technical Administrators to develop and support www.pacteresources.com website. Each Perkins recipient, secondary and postsecondary, describes in their Local Plan application strategies that lead to program improvement. Key strategies include: Literacy and Numeracy Integration, Instructional References (websites, books, etc.), Cross-Curricular Linkages, Targeted Professional Growth, Strengthening Student Performance, Teacher Evaluation, Student Support and Guidance, Team Building, Standardized and Aligned Curriculum, Systemic Change, Data-driven Programs, Assessment-based Instruction, Stakeholder Engagement, Education Partner Development, and Eligible Content Instruction. The best practices can be used by the local recipients to improve instruction, curriculum, data collection, and student services.

The plan and services for the tenth year of the Technical Assistance Program (TAP) continued for the 2017-2018 school year. The TAP was established to assist career and technical education instructors and administrators at career and technical centers and high schools to improve student academic and technical achievement. Participation continues to be voluntary. Every career and technical center participates with TAP.

For the 2017-2018 school year, activities available through the Pennsylvania Technical Assistance Program (TAP) will be delivered in the same format as this year. This format has proven to be the most effective form of delivery. Each activity will be available on-site at each school that chooses an activity.

Each activity will include one or two days for training and four days of coaching. Each school must commit to one day of in-service professional development where a cohort of staff can participate in the activity.

Each school must submit an Intent to Participate form for each TAP activity chosen.

Each school that indicates an interest in an activity must provide information on how the activity will improve performance on one or more of the Perkins indicators listed below.

1S1 Academic Attainment – Reading/Language Arts

1S2 Academic Attainment – Mathematics

2S1 Technical Skill Attainment

3S1 Secondary Students Attainment

4S1 Student Graduation Rates

5S1 Secondary Placement

Professional development includes literacy, math, and writing in the CTE classroom. Additional professional development covers career counseling.

Literacy professional development illustrates teaching strategies related to literacy for implementation into all instructional environments and the CTC classroom. These strategies address current literacy deficiencies of the student population.

Additional regional workshops focused on Perkins On-site Monitoring Reports, ACT 6- Concentrator Definition, Best Practices Student Retention and Transfer and Things to Know Before/While Completing a Perkins Local Plan. The workshops are one day and occurred during the month of April. The workshops provided information to Perkins Coordinators, CTE teachers, PIMS administrators and Budget Managers.

At the Integrated Learning Conference, a 3-hour session - Highly Effective Practices in Nontraditional Programming and Outreach – was presented to 90 people. The presenter shared information gleaned from numerous conversations with schools across the state about their programs that are effective in enrolling nontraditional students. Three schools were part of the presentation- Lehigh CTI, Philadelphia SD, and Delaware County CC. Twenty-two other schools' effective practices were created using the 'Program Profiles' format developed by Morrell Consulting. A total of 29 'Program Profiles' from 22 schools were developed. The goal was to provide tools faculty and administrators can use to recruit and sustain to graduation students that are underrepresented by gender (nontraditional) in career and technical education programs in both secondary and post-secondary institutions.

Topics discussed included:

Creating a climate of classroom inclusion and normalizing experiential learning to engage and empower students and improve outcomes for all.

Creating an equitable learning environment to improve student outcomes-- 3 Perkins schools that are meeting indicators shared some of their successful strategies for nontraditional recruitment and completion.

Crafting school-specific strategies and operations that build, revise, and expand on current efforts to attract and retain non-traditional students.

7. Serving individuals in state institutions

Part I: State Correctional Institutions

Amount of Perkins funds used for CTE programs in state correctional institutions:

315725

Number of students participating in Perkins CTE programs in state correctional institutions:

1070

Describe the CTE services and activities carried out in state correctional institutions.

57 Adjudicated youth participate in programs at Hickory Run State Park, White Haven, Pennsylvania in the Building Trades/Carpentry, Entrepreneurship, and STREAM Factory areas.

Less than 1% of the Perkins program allocation is provided to the state corrections facilities in order to serve youth in Pennsylvania's detention/corrections facilities. The funds support instructional staff at three state correctional institutions (SCI) and Carbon-Lehigh Intermediate Unit #21. The SCI's and the IU provide career and technical education that leads to trade-based certifications in programs that offer employment opportunities in high demand occupations throughout Pennsylvania. Both provide occupational training, applied academics, employability training, and assessment with the goal of improving the youths' chances of finding employment upon release.

Part II: State Institutions Serving Individuals with Disabilities**Amount of Perkins funds used for CTE programs in state institutions serving individuals with disabilities:**

0

Number of students participating of Perkins CTE programs in institutions serving individuals with disabilities:

0

Describe the CTE services and activities carried out in institutions serving individuals with disabilities.

The Bureau of Corrections Education provides supplemental education services for adults in career and technical education programs and also provides special educational services and Title I services to inmates who have been identified as requiring special needs. However, during the 2017-2018 reporting year, there were no inmates with disabilities served in any of the three state correctional institution programs.

The regulation reads as follows: Sec. 112(a)(s)(A) an amount equal to not more than 1 percent of the amount allotted to the State under section 111 for the fiscal year shall be made available to serve individuals in State institutions, such as State correctional institutions and institutions that serve individuals with disabilities. All funds support the State correctional institutions and are not utilized at institutions that serve individuals with disabilities and the Department does not have information to provide for this section of the report.

8. During the reporting year, did your state use Perkins funds to support public charter schools operating career and technical education programs?

Yes

Pennsylvania has one charter school with Department approved career and technical education programs. The charter school now has seven approved programs of study. As a grant recipient, the charter school must submit a local plan application, meet all required uses of funds, and meet accountability performance levels. Staff provided technical assistance to the charter school regarding Perkins requirements. The charter school also participates in the Technical Assistance Program.

9. During the reporting year, did your state use Perkins funds to support family and consumer sciences programs?

Yes

Major initiatives and activities that support the Family and Consumer Sciences (FCS) Programs included training and professional development for instructors In cooperation with Temple University and Indiana University of Pennsylvania, Family and Consumer Sciences teachers received training in Understanding Autism and working successfully with students on the Autism spectrum. How to identify the ways in which teens hide and use drugs and alcohol, How to use Google classroom as an effective instructional tool. How to effectively address distracted teen driving and keeping kids safe on social media and the internet. Emotional vs. Healthy eating topics were presented. Curriculum was purchased through FCCLA for FCS teachers on the 6 national Programs

10. During the reporting year, did your state use Perkins funds to award incentive grants to eligible recipients for exemplary performance or for use for innovative initiatives under Sec. 135(c)(19) of Perkins IV?

No

11. During the reporting year, did your state use Perkins funds to provide career and technical education programs for adults and school dropouts to complete their secondary school education?

No

13P. During the reporting year, did your state use Perkins funds to provide assistance to individuals who have participated in Perkins assisted services and activities in continuing their education or training or finding appropriate jobs?

No

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Step 3: Use of Funds: Part C

1. During the reporting year, how did your state provide support for career and technical education programs that improve the academic and career and technical skills of students through the integration of academics with career and technical education?

The Pennsylvania Department of Education, Bureau of Career and Technical Education conducted the 26th annual conference on November 8-10, 2017 at the Penn Stater Hotel and Conference Center in State College, PA. The conference was designed to share successful strategies that encourage the implementation of educational initiatives that enhance learning opportunities for all students. Over 75 concurrent sessions, three pre-conference workshops, and a variety of meetings and professional development activities were scheduled during the conference.

Over 500 participants attended, including instructors, administrators, counselors, postsecondary partners, and exhibitors. Having classroom instructors and other educators from the field as presenters contributed to the conference's success. These presenters provide instructional strategies and showcase best practices of career and technical education programs that improve the academic and technical skills of students through the integration of academics with career and technical education.

The conference program included four strands of specific educational topics in the areas of:

Programs of Study

Special populations

Classroom performance

Career development and counseling

The Department works on ensuring that the approved career and technical education programs are aligned with the CIP codes that the state has adopted. Program approvals are based on the local schools' technical and academic scope and sequence, and its alignment to a CIP description. Additionally, the Department works with the secondary instructors and postsecondary faculty and business/industry representatives to develop statewide technical task grids that must be taught as part of the POS. Postsecondary faculty ensures the secondary and postsecondary technical coursework are aligned. Postsecondary faculty award college credits to the secondary students for the secondary technical coursework based on the alignment.

The development of the statewide technical task grids includes the identification of the Pennsylvania Core Academic standards. The Programs of Study are revised every three years. The statewide technical task grid and the crosswalk to the Pennsylvania Core Academic standards are revised, also.

The Department also provides technical assistance to the schools in regard to improving student achievement on academic and technical skills assessments. The technical assistance provided is described in previous sections of the CAR narrative and includes activities such as sharing of best practices regarding academic and technical achievement, integration of CTE and academic content, use of data to inform instructional decisions, and developing projects that include alignment of technical content to academic content.

2. During the reporting year, how did your state support partnerships among local educational agencies, institutions of higher education, adult education providers, and, as appropriate, other entities, such as employers, labor organizations, intermediaries, parents, and local partnerships, to enable students to achieve state academic standards, and career and technical skills.

The Agency supports partnerships in several ways and includes partnerships with business and industry and between secondary and postsecondary providers. The focus of the partnerships is on improving student academic and technical skill attainment levels.

The Bureau supports the Pennsylvania Automotive Association (PAA) Foundation that provides an annual student competition. The event committee designs five workstations that can include: Automotive Alignment, Electrical Systems, Brake Systems, Waveform Measurement, and Information Systems; and processing a new car delivery with troubleshooting for vehicle faults is typically part of the competition. The ten highest scoring schools in the PAA western and central regions are determined and a school team is selected based on the written test scores of the two top.

This year, 103 high school students from sixteen secondary school automotive mechanics programs participated in the PAA Automotive Technology written examination. The top ten Pennsylvania schools advancing to compete in this year's performance competition.

The 2018 first place secondary school in the PAA Automotive Competition event later went on to finish in ninth place in the New York International Auto Show held in Manhattan in February 2018. The National Automotive Technology Competition is the auto industry's largest school-to-work initiative, which has the nation's best high school automotive career and technical education students compete against one another for the title of "America's Top Technician." students in each school.

Additionally, the Pennsylvania Automobile Association Foundation's Automotive Instructor's Conference was held this year on May 11, 2018 at the Central PA Institute of Science of Technology, located in Pleasant Gap, PA, with 110 automotive instructors attending the day-long conference. Automotive safety vehicle inspection, vehicle emissions testing and program updates relevant to Automotive Service Excellence (ASE), National Automotive Technicians Education Foundation (NATEF) and the Automotive Youth Educational System (AYES) were presented. AYES is a new approach for hiring and training automotive technicians. AYES is a national partnership of automobile manufacturers and dealers and education departments in many states around the country. Together these groups are helping fill the many open service positions by preparing students for entry-level jobs in dealerships across the country. The 2018 PAA Automotive Instructor's Conference agenda included discussions concerning the PDE SOAR Automotive Mechanics Technology Program of Study and postsecondary articulation opportunities, and updates from Pennsylvania Department of Transportation concerning vehicle inspection and vehicle inspection certification testing requirements for PA automotive service technicians.

The Pennsylvania Workforce and Development Association (PWDA) represents the regional workforce investment boards (WIB). The Bureau supports the annual PWDA Employment, Training and Education Conference. The Education Workforce Leadership Award was given in conjunction with the 2018 Pennsylvania Workforce and Development Association's Annual Conference on May 16-18, 2018. Each year, the PDE/BCTE selects an educational partnership to receive the Education Workforce Leadership Award. Eleven schools offering career and technical education programs nominated an educational partnership which has contributed to the growth and refinement of an operating career and technical education program in their school.

The Department sits on the Pennsylvania Apprenticeship and Training Council. This appointment allows the Department to discuss programs of study and connections to registered apprenticeship programs. There is continued discussion on expanding apprenticeship programs through connections from apprenticeship programs with secondary and postsecondary CTE education providers.

The Department sits on the Pennsylvania Workforce Development Board and various subcommittees. The Pennsylvania Workforce Development Board (PA WDB) is the Governor's principal private-sector policy advisory on building a strong workforce development system aligned with state education policies and economic development goals. The PA WDB is aware of the Pennsylvania Core academic standards and the Programs of Study and has been supportive of both.

The Department has a partnership with the Pennsylvania Association of Career and Technical Administrators. The partnership leads to viable professional development and technical assistance for instructors and administrators in CTE settings. This also includes developing resources that assist CTE administrators to engage the community and business partners with the educational program offerings.

3. During the reporting year, did your state use Perkins funds to improve career guidance and academic counseling programs?

Yes

The committee members are responsible for providing updated materials related to the Career Education and Work (CEW) standards toolkit website, which is available at <http://www.education.pa.gov/k-12/pacareerstandards/Pages/default.aspx#tab-1>. The lesson plans and toolkit are designed to be used by counselors, career coaches, and instructors with the goal to assist students in making informed career decisions.

Bureau continues to support the PACareerZone website www.pacareerzone.com to assist teachers, students, parents, and the public with career exploration and planning. This website resource can be utilized in the classroom by students and job seekers interested in finding information on careers. It is a user-friendly, interactive tool that contains information on 900 high priority occupations in Pennsylvania. Students complete a self-assessment to determine their likes and dislikes that relate to job tasks and personality traits. Once the assessment is completed, the software aligns those likes to job clusters. Students can further research the cluster to find a job title that they are interested in and continue their research to learn more about the job tasks, labor market in Pennsylvania, salary, scholarship opportunities, educational needs, and postsecondary programs. The website includes a page named Up the Ladder that is geared toward elementary students that includes gaming elements and badges to be earned for exploring various career pathways. This feature provides a venue for initiating career discussions and can be found at www.pacareerzone.org/educators. Both sites are fully integrated into the Pennsylvania Academic Standards for Career Education and Work and provide teachers essential tools to show the relevance of each student's educational experiences to their individually chosen career pathways.

The Bureau developed tools for counselor use for developing a comprehensive K-12 guidance plan as required by Pennsylvania Title 22, Chapter 339. The tool demonstrates that school counseling programs and school counselors are integral members of the school academic team in raising achievement, meeting school goals and preparing Pennsylvania students for college and career success. The "Tools for Developing a Comprehensive K-12 Guidance and Counseling Plan" has thirteen basic steps to guide schools through a process to meet the requirements in Pennsylvania. The Department provides technical assistance to school districts as they develop their K-12 guidance plans that will be submitted to the Department.

4. During the reporting year, did your state use Perkins funds to establish agreements, including articulation agreements, between secondary school and postsecondary career and technical education programs to provide postsecondary education and training opportunities for students?

Yes

The statewide articulation agreement is found online and is an agreement between the Department and the Perkins postsecondary entity. Articulation for advanced credit transfer is made possible when Perkins-allocated postsecondary institutions and Pennsylvania secondary schools offering SOAR programs agree to the terms and conditions stated in the Perkins Statewide Articulation Agreement. This agreement outlines the general agreement conditions between secondary and postsecondary institutions and student qualification measures allowing for the student to acquire postsecondary education credits leading to an industry-recognized credential or certificate at the postsecondary level or an associate or baccalaureate degree.

The Program of Study (POS) ensures that the secondary planned academic and technical courses are aligned to the postsecondary general education and technical courses, bound by a PDE approved statewide articulation agreement. A BCTE Perkins Program of Study Statewide Articulation Agreement (Agreement) was released by the Agency on July 7, 2009. By developing statewide technical standards aligned to industry expectations and aligning to 11th grade academic standards, students can earn college credit for the secondary career and technical education coursework.

Students can earn between 2 to 22 college credits, depending upon the specific program of study due to the Perkins IV Statewide Articulation Agreement.

As of June 30, 2018, the Agency has 705 postsecondary statewide Perkins statewide articulation agreements reported across 42 POS for a total of 1,463 agreements with secondary programs. The course/credit alignment reported on a website located at www.collegetransfer.net. For program year 2017-2018, twenty-eight (28) postsecondary institutions reported credit alignment in various PDE developed POS. Some postsecondary institutions have aligned credit opportunities with as many as twenty-six different POS. As postsecondary faculty continue to make program-to-program credit alignments, the transfer and articulation information for PDE/BCTE POS is listed on the college transfer website: www.collegetransfer.net. If credits are aligned to a commonwealth community college partner, the information can also be found on the Pennsylvania Articulation and Transfer Center at www.PATRAC.org.

An Agreement amendment was enacted by PDE/BCTE on June 1, 2011. The Agreement amendment further defines transfer credit awarding and waiver processes to be used by Perkins-Allocated Postsecondary Institutions in order to meet the measures of full compliance. All Perkins-Allocated Postsecondary Institutions met the measures of full compliance on June 30, 2013.

Pennsylvania Information Management System (PIMS) Perkins Postsecondary Institution Collection for academic year (AY) 2017-2018 was completed recently. One area of data collected is the Program of Study Articulated Credit (POS AC) data. This data is submitted by the Perkins Postsecondary Institutions to report the total students formally granted Program of Study Articulated Credits based on qualifying secondary education performance and subsequent enrollment in the Postsecondary Articulated Program. Students awarded the postsecondary credits have met all student qualification measures in the PDE-approved secondary program of study known as the Students Occupationally and Academically Ready (SOAR) Program, student qualification measures are defined under the Perkins Statewide Articulation Agreement (Agreement).

AY 2017-2018, a total of 44 students were awarded SOAR Program of Study Articulated Credit and 313 total postsecondary credits were awarded. Thirty-three (33) students were reported in PIMS by Perkins-Allocated Postsecondary institutions as receiving SOAR Programs of Study articulated credits. A total of 281 Postsecondary course credits were awarded to qualifying students. Also, eleven (11) students received SOAR Program of Study articulated credits as reported by Perkins-Allocated Career & Technical Education Centers offering the Licensed Practical/Vocational Nursing Program. A total of 32 college credits or 480 equivalent clock hours of instruction awarded were awarded among the eleven qualifying students.

The total dollar value of the 313 credits awarded in AY 2017-2018 is \$72,966.00. credits were awarded to qualifying students matriculating into aligning Perkins-Allocated Postsecondary Programs of Study identified in the various Perkins IV Statewide Articulation Agreements. This dollar amount is based upon Perkins-Allocated Postsecondary Institutions current average of per credit hour tuition cost. Included in the total dollar value tabulation are the computed reporting community college tuition rates using the average cost per credit hour charged.

Also included in the total dollar value is \$3,840.00 of postsecondary credit awarded by the Pennsylvania Career and Technical Education Centers tabulated by a 1,500 hour average Licensed/Practical Vocational Nursing Program at \$12,000 average for the Licensed Practical/Vocational Nursing program tuition cost.

The dollar amounts listed above do not include additional savings for students in campus fees, books, lab equipment/materials, campus commuting and/or on-campus living expenses.

In terms of cumulative data collected by the Department over the last seven AY years in Programs of Study Articulated Credit (POS AC), two hundred and fifty four (254) students have been awarded SOAR program credit since 2011 thru the Perkins IV Programs of Study Articulation Agreements.

Since 2011, there have been 1,632 postsecondary credits awarded to qualifying SOAR Program students. The cumulative total dollar value of \$400,826.50 in Program of Study postsecondary credit has been awarded since 2011.

Department staff presented the Students Occupationally and Academically Ready (SOAR) Career and Technical Programs of Study Initiatives at three state conferences and one regional conference in 2017-2018.

The first presentation occurred at the 26th Annual PDE/BCTE Integrated Learning Conference, held November 8-10, 2017 in State College, PA. During the ILC conference, a School Improvement/Program of Study strand of eight (8) workshops was provided to conference attendees. The Programs of Study strand focused on the components of this progressive sequence of activities that aligns secondary education with postsecondary education to adequately prepare students for postsecondary success. The Programs of Study strand focused on the components of this progressive sequence of activities that align secondary education with postsecondary education to adequately prepare students for postsecondary success. The Programs of Study strand included: Pennsylvania's Students Occupationally and Academically Ready (SOAR) Program(s) of Study Orientation, POS Task Data Tracking, POS Data Assessment, POS Task List Completion Rates & SOAR Qualifiers, SOAR Articulation and Marketing Updates, Pathways for Postsecondary Credit Opportunities, Technology Integration with Student-Centered and Project Based Learning, and Providing Accountability through Proof of Performance. The strand drew 273 conference participants, averaging 34 participants per session.

The second presentation occurred at the Pennsylvania Automobile Association Foundation's Automotive Instructor's Conference was held on May 11, 2018, in Pleasant Gap, PA. This session presented an overview of the Pennsylvania Department of Education's Students Occupationally and Academically Ready (SOAR) Programs of Study Initiative. The session provided web-based resources to learn more about the SOAR Programs Initiative, discussion of Programs of Study development and revision, and student documentation required to qualify for postsecondary credit under the terms and conditions of the Perkins IV Statewide Articulation Agreement with an emphasis upon the Automotive Mechanics Technology POS was given.

The third presentation occurred at the PA Workforce Development Association's 34th Annual Employment, Training and Education Conference held May 16, 2018 at the Hershey, PA. This session presented an overview of the Pennsylvania Department of Education's Students Occupationally and Academically Ready (SOAR) Programs of Study Initiative. Beginning in 2008, the Pennsylvania SOAR Program Initiative is currently offering 41 Career and Technical Education Programs of Study. SOAR Programs include the opportunity for a qualifying student to earn postsecondary course credit(s) through the PDE statewide articulation agreements established with 42 postsecondary institution partners located in PA, NY, and MD. The session provided web-based resources to share more about the SOAR Programs Initiative through the Pennsylvania Articulation and Transfer Center at www.PAcollegetransfer.com and the PA Bureau of Career and Technical Education Program of Study search engine at www.collegetransfer.net.

PDE/BCTE staff presented a regional workshop on the Students Occupationally and Academically Ready (SOAR) Career and Technical Programs of Study Initiatives on May 4, 2018, in Schnecksville, PA. Sixty educators attended the Temple University CTE Center Curriculum and Career Planning workshop. The session provided web-based resources about the SOAR programs initiative through the Pennsylvania Articulation and Transfer Center at www.PAcollegetransfer.com and the Pennsylvania Bureau of Career and Technical Education Program of Study search engine at www.collegetransfer.net. The session also included a presentation of marketing materials and efforts to inform guidance counselors, parents, and secondary students of the SOAR programs initiative. Representatives from three Perkins-allocated Institutions—Lackawanna College, Harcum College, and the Harrisburg Area Community College—shared information and resources on how each postsecondary institution is marketing the SOAR Programs Initiative in Pennsylvania.

5. During the reporting year, did your state use Perkins funds to support initiatives to facilitate the transition of sub baccalaureate career and technical education students into baccalaureate programs?

Yes

For 2017-2018, the Bureau of Career and Technical Education has established Program to Program articulation. The Agreements allow students who pursue the programs areas listed below in secondary school and matriculate to Perkins-Allocated Postsecondary Institutions, which may lead to an Associate's or Bachelor's degree.

The program areas allowing such career pathway opportunities to include: Accounting, Allied Health Technology, Applied Management, Automotive Mechanics Technology, Automotive Technology Management, Auto Body Collision Repair, Baking & Pastry Arts, Business Administration: Banking and Finance, Business Administration: Management Concentration, Business Administration: Marketing Concentration, Carpentry, Computer Systems Technology, Culinary Arts, Culinary Arts and Systems, Electrical Technology, Electronics and Computer Engineering Technology, Heating, Ventilation, Air-Conditioning Technology, Heating, Ventilation & Air Conditioning Design Technology, Health Services Management, Hospitality Management, Information Technology: Information Assurance and Security, Information Technology Sciences: Gaming and Simulation, Masonry, Machine Tool Technology, Nanofabrication, Plumbing, Residential Construction Technology & Management: Building Construction Technology-Masonry Concentration, Residential Construction Technology & Management: Building Construction Technology Concentration, Residential Construction Technology & Management: Architectural Technology Concentration, Software Development and Information Management, Web Design, Web and Interactive Media, and Welding.

Additionally, program-to-program Agreements at two postsecondary institutions, one Perkins Allocated (Pennsylvania College of Technology) and one Out-of-State Postsecondary Institution (the State University System of New York/Cobleskill), allow the credits attained in the Associate of Science Degree to transfer to the Bachelor of Science Degree in areas of Agriculture Business Management, Agricultural Mechanization, Applied Management, Automotive Technology Management, Business Administration: Banking and Finance, Business Administration: Management Concentration, Business Administration: Marketing Concentration, Culinary Arts Management, Electronics and Computer Engineering Technology, Heating, Ventilation & Air Conditioning Design Technology, Hospitality Management, Information Technology: Information Assurance and Security, Information Technology Sciences: Gaming and Simulation, Masonry, Nanofabrication, Residential Construction Technology & Management: Building Construction Technology-Masonry Concentration, Residential Construction Technology & Management: Building Construction Technology Concentration, Residential Construction Technology & Management: Architectural Technology Concentration, Software Development and Information Management, Web and Interactive Media.

As indicated in an earlier section of the report, a BCTE Programs of Study Out-of-State Articulation Agreement (Agreement) was approved by the Agency on January 11, 2010. One purpose of this Agreement is to ensure that matriculated students are awarded college-level credit or equivalent clock hours toward the completion of the approved PDE POS, leading to an industry-recognized credential or certificate at the postsecondary level, or an associate or baccalaureate degree.

6. During the reporting year, did your state use Perkins funds to support career and technical student organizations?

Yes

In 2017-2018, BCTE committed \$ 45,873 in federal funding to support CTSO programs. Through this support, the Bureau gives assistance to career and technical student organizations (CTSO) by providing for curricular activities that enhance the quality of student leadership training at secondary and collegiate levels. \$31,000. Was committed to purchase curriculum for the FCCLA and DECA

Additionally, BCTE has staff dedicated to support each of the CTSOs. The CTSO staff work with the executive boards of the related CTSO and assist with coordinating regional and state skills conferences and when applicable assist with the national skills conferences. CTSO staff are 100% state funded positions. Current state regulation requires each approved secondary CTE program to include CTSOs as part of the curriculum. All approved CTE programs must include human relations skills, knowledge of occupations, leadership competencies, and positive attitudes toward fulfilling occupational, civic, social, and community responsibilities. Pennsylvania recognizes eight student organizations that provide career awareness, leadership, motivation, and recognition for career related skills. The CTSOs are an extension of the classroom instructional program and are required to integrate academics and career and technical skills into project-based experiences.

7. During the reporting year, did your state use Perkins funds to support career and technical education programs that offer experience in, and understanding of, all aspects of an industry for which students are preparing to enter?

Yes

All local plans include all aspects of an industry with each Perkins recipient responding how they use Perkins funds to support all aspects of an industry. Activities include but are not limited to: purchasing equipment (recommended by Occupational Advisory Committees) that is being used in industry; incorporation of job shadowing; including field trips/site visits to business related to program area; incorporating internships; externships, pre-apprenticeships and industry mentoring programs; and the use of cooperative education.

8. During the reporting year, did your state use Perkins funds to support partnerships between education and business, or business intermediaries, including cooperative education and adjunct faculty arrangements at the secondary and postsecondary levels?

No

9. During the reporting year, did your state use Perkins funds to support the improvement or development of new career and technical education courses and initiatives, including career clusters, career academies, and distance education?

Yes

Academic Crosswalks for Phases I, II, and IV have been reviewed and updated to correlate with the most recent version of the task lists for each Program of Study. The Academic Crosswalks have been posted to the Pennsylvania Department of Education website and have been formatted to conform to ADA compliance standards.

Phases I, II, and V Program of Study task grids are in the revision process, which began in September 2017. All the programs of study have met in face-to-face meetings, in order to finalize task list revisions. After these revisions have occurred, the newly revised task grids will be distributed to postsecondary institutions, for their input, concerning the proposed revisions, and the resulting impact that such revisions will have on current articulation agreements. After the postsecondary input has been reviewed and organized, the finalized task grids will be posted on the Pennsylvania Department of Education website in May 2018. Such revised task grids will be in effect for the 2018-19 academic year.

The following Programs of Study met on October 16-17, 2017, at the Toftrees Resort, in State College:

- 52.0302 Accounting Technology/Technician and Bookkeeping
- 47.0603 Auto-body/Collision and Repair Technology/Technician
- 12.0501 Baking and Pastry Arts/Baker/Pastry Chef
- 46.0201 Carpentry/Carpenter
- 11.0901 Computer Systems Networking and Telecommunications
- 11.0801 Web Page, Digital/Multimedia and Information Resources Design
- 48.0508 Welding Technology/Welder

The following Programs of Study met on October 17-18, 2017, at the Toftrees Resort, in State College:

- 01.0201 Agricultural Mechanization, General
- 19.0708 Child Care and Support Services Management
- 50.0402 Commercial and Advertising Art
- 15.1301 Drafting and Design Technology/Technician, General
- 51.0801 Medical/Clinical Assistant
- 52.1801 Sales, Distribution and Marketing Operations, General

The following Programs of Study met on November 1-2, 2017, at the Toftrees Resort, in State College:

- 52.0401 Administrative Assistant and Secretarial Science, General

47.0604 Automobile/Automotive Mechanics Technology/Technician

43.0107 Criminal Justice/Police Science

51.0601 Dental Assisting/Assistant

46.0399 Electrical and Power Transmission Installers, Other

10.0399 Graphic Communications, Other

51.9999 Health Professions and Related Clinical Sciences, Other

The following Programs of Study met on November 2-3, 2017, at the Toftrees Resort, in State College:

01.0000 Agriculture, General

01.0301 Agricultural Production Operations, General

01.0601 Applied Horticulture/Horticultural Operations, General

15.0303 Electrical, Electronic and Communications Engineering Technology/Technician

51.0899 Health/Medical Assisting Services, Other

47.0201 Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology/Tech

48.0501 Machine Tool Technology/Machinist

10. During the reporting year, did your state use Perkins funds to provide activities to support entrepreneurship education and training?

No

11. During the reporting year, did your state use Perkins funds to improve the recruitment and retention of career and technical education teachers, faculty, administrators, or career guidance and academic counselors, and the transition to teaching from business and industry, including small business?

No

12. During the reporting year, did your state use Perkins funds to support occupational and employment information resources?

Yes

The state continues support of the Pennsylvania career standards toolkit and career websites with state funds. The website identifies the occupations that are classified by Pennsylvania as High Priority Occupations. The website also contains videos of numerous occupations that highlight the skills, experience, wages, and projected openings in Pennsylvania. <https://www.pacareerzone.org/videos> . website now includes a page named Up The Ladder that is geared toward elementary students that includes gaming elements and badges to be earned for exploring various career pathways. This new feature provides a venue for initiating career discussions and can be found at www.pacareerzone.org/educators. Both sites are fully integrated into the Pennsylvania Academic Standards for Career Education and Work and provide teachers essential tools to show the relevance of each student's educational experiences to their individually chosen career pathways.

In addition to the Pa CareerZone website, the Bureau supports an online toolkit related to the Pennsylvania Academic Standards for Career Education and Work. These standards outline what students should know and do in grades K-12 to research a job, find a job, retain a job, and entrepreneurship. The website,

<http://www.education.pa.gov/k-12/pacareerstandards/Pages/default.aspx#tab-1> , includes numerous links to career resources that include O*NET online and Pennsylvania Workforce Development.

During onsite reviews of Perkins recipients, the Department provides occupational information provided by the Pennsylvania Department of Labor and Industry. This includes information on the High Priority Occupations, which are those occupations that lead to family sustaining wages where adequate openings exist.

<http://www.workstats.dli.pa.gov/Products/HPOs/Pages/default.aspx> .This also includes information on the Top 50 Employers in each Pennsylvania county.

http://www.workstats.dli.pa.gov/Documents/Top%2050/Dauphin_County_Top_50.pdf .