Consolidated Annual Report, Program Year 2015 - 2016 Tennessee

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

Secondary Response:

The division of College, Career and Technical Education (hereinafter "division") implemented a Competency Attainment Rubric report statewide during the 2010-11 school year, which was designed to help teachers evaluate student performance more objectively. Currently, classroom teachers, who teach a CTE course, utilize the approved Tennessee CTE Competency Attainment Rubric to evaluate student technical skill attainment for each standard (and/or competency, where applicable) for all enrolled students. This information is entered into the Tennessee CTE data repository system, eTIGER, by the teacher and is utilized to calculate each student's technical skill attainment percentage on each course in aggregate.

In preparation for the 2014-15 school year, eTIGER was updated to reflect changes in the state CTE course standards, focusing assessment of technical skills on more comprehensive, holistic development of knowledge and skills.

During the 2015-16 school year, a request for proposals to develop CTE course exams was crafted to assist in the planning and development of exams. The contract will be awarded in the 2016-17 school year to establish CTE course exams for pilot in the 2017-18 school year.

The division created a Tennessee Specific Industry Certification (TSIC) in Animal Science to serve as a program of study capstone industry exam, certifying students in specific knowledge and skills related to the animal science field of study within Agriculture, Food, & Natural Resources career cluster. Districts will pilot the Tennessee Specific Industry Certification in 2016-17.

Postsecondary Response:

The Tennessee Board of Regents, Office of Community Colleges (OCC) currently collects data related to assessments required of health care professionals for certification of license. This constitutes approximately 18 percent of all community college graduates and approximately 20 percent of the programs of study. Each program that is funded under the American College Testing (ACT) must either be accredited by a professional accreditation agency (beyond the college's SACS accreditation) or go through a periodic academic audit conducted through the auspices of the Office of Academic Affairs of the Tennessee Board of Regents (TBR) and the Tennessee Higher Education Commission (THEC).

The TBR, Office of the Tennessee Colleges of Applied Technology (TCAT) collects and analyzes data related to assessments required for programs with occupational licensure in health care, cosmetology, barbering, aesthetics and truck driving programs. During the reporting year, Perkins funds were used to provide Certified Production Technician (CPT) Instructor Certification Training through the Manufacturing Skills Standards Council (MSSC). The CPT training enabled instructors to offer the certification to students. In addition, the Office of the Tennessee Colleges of Applied Technology (TCAT) used Perkins funding to participate in the National Center for Construction Education and Research (NCCER) training for master instructors. Having a master trainer on staff allows the TCAT System Office to provide NCCER on-site instructor training and certification sponsorship for eligible institutions.

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

Secondary Response:

In 2013-14, Tennessee adopted the nationally recognized 16 career clusters into the existing data repository system, eTIGER. Since then, eTIGER has been modified accordingly to ensure accurate data collection for all CTE courses and continuous reliable and valid data reporting for 2015-16 school year.

As new CTE courses have been developed and existing CTE courses have been revised, eTIGER has been updated to reflect all new course standards so that student skill attainment data can be collected. In the 2015-16 school year, new course codes for early postsecondary CTE courses were added to eTIGER. This reflected 77 dual enrollment courses and 27 Cambridge courses. These additions allow for stronger reporting of Tennessee CTE early postsecondary courses by categorizing each with a separate course code. Furthermore, nine practicum courses, in addition to two work-based learning courses, enhance our data collecting on student work experiences in different career clusters.

In working with the department of education's division of IT, system lag and user timeouts have been dramatically improved by migrating the CTE data repository system, eTIGER, to a new server in May 2016.

Finally, Perkins accountability and data staff members have been working collaboratively with several state agencies to help improve the use of the state's P-20 longitudinal data system. In the 2015-16 program year, data began to flow more efficiently into the P-20 data system, allowing state and district CTE staff to get a wider and deeper view into CTE student outcomes.

Postsecondary Response:

The web-based reporting system for the community colleges continues annually. Since spring of 2008, institutional research personnel from the colleges work with institutional research personnel from the Tennessee Board of Regents (TBR) in the development and structuring of the fields. Presently, the colleges are able to utilize the system to report all appropriate student record data, resulting in aggregate reports. In addition, the web portal allows individual campuses to receive immediate feedback on CAR submissions in relation to the state's agreed upon levels of performance (i.e. FAUPL). The colleges are discussing currently a dashboard approach for the collection of data for an ease of sharing with stakeholders.

No Perkins funds were used to enhance data collection for the TCAT system during the reporting year. In previous years, Perkins funds were used to enhance the Colleges of Applied Technology's Student Information Management System to enable each TCAT to collect and report required Perkins data. The TCAT central office continues to work with institutional research personnel to improve the quality and accuracy of all data collection and reporting processes.

Currently, the TCAT central office is engaging in Business Process Modeling with Strata consultants. The end result of this project is to increase the consistency in processes across the system and to prepare the TCAT system to move to the Banner Student Information System. Full transition to Banner is scheduled to take place in fall of 2018. This move will improve the ease, validity and reliability of data reporting for TCATS. In addition, it will allow for greater system level access to data reporting and integration with other TBR institutions that currently use Banner. Once this project is complete, it will allow all TCAT campuses to report student data to the National Student Clearinghouse.

Consolidated Annual Report, Program Year 2015 - 2016 Tennessee

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?

Secondary Response:

Risk-based monitoring is conducted annually in approximately 25 percent of all LEA CTE programs based on prior level of risk. Technical assistance is provided to Districts prior to monitoring and as follow-up for Districts scoring as higher risk. In order to receive Perkins funds, all CTE teachers are required to complete a Quality Performance Indicator (QPI) checklist annually to ensure that minimum standards for implementing a quality CTE program are achieved. The ten (10) indicators on the QPI checklist ensure that District CTE programs are:

1. Of such size to offer a sequence of three or more earned course credits

2. Of such scope that they align with state approved programs of study within career clusters

3. Providing a certified and appropriately endorsed teacher for all courses offered

4. Teaching the state approved curriculum standards

5. Operating with a state approved articulation agreement for a program of study or an approved articulation agreement approved by the lead administrators of secondary and postsecondary institutions (where available)

6. Supported by current labor market data to support high skill, high wage or high demand careers

7. Addressing and teaching all aspects of industry

8. Actively working in cooperation with an advisory panel

9. Utilizing a career and technical school organization as a support for the instructional program

10. Promoting the integration of CTE and academic curriculum

In addition to risk-based monitoring visits, the division of CCTE conducted targeted program visits to observe teachers in the classroom, discuss instructional strategies and the implementation of course standards. During these visits, district feedback is sought on standards and implementation, programs of study and the availability of resources, observations of standards being taught in the classroom, and direct support of the coaching model and the vision of excellent CTE instruction.

Annually, the division ensures select Districts have their programs and services monitored for students in special populations in accordance with U.S. Department of Education's Office of Civil Rights.

Additionally, the Tennessee Council for Career and Technical Education (TCCTE), which is a state legislated body that assesses secondary and postsecondary CTE programs, identifies areas for improvement to ensure system effectiveness and eliminate barriers to success for Tennessee students at the secondary and postsecondary levels. The TCCTE provides a biennial report on the status of career and technical education in Tennessee. This report looks at statewide opportunities and challenges and makes recommendations to the Department of Education, the legislature, Tennessee Board of Regents, the Tennessee Higher Education Commission, and other key stakeholders in Tennessee. Specific strategies are recommended to address issues of equity, accessibility, and attainment that school districts and state entities can pursue to help address systemic challenges and to pursue higher attainment for students who concentrate in CTE. These reports are posted publicly online at the following address: https://tn.gov/education/topic/tccte

Postsecondary Response:

The Office of Community Colleges (OCC) collects data from campuses related to the assessments required of health care professionals for certification of license consisting of approximately 18 percent of all community college graduates and approximately 20 percent of the programs of study. Each program that is funded under the American College Testing (ACT) must either be accredited by a professional accreditation agency (beyond the college's SACS accreditation) or go through a periodic academic audit conducted through the auspices of the Office of Academic Affairs of the Tennessee Board of Regents (TBR) and the Tennessee Higher Education Commission (THEC). Additionally, as part of the Perkins IV monitoring process, all campuses are monitored to include program and fiscal reviews.

The TCAT central office requires each institution to submit enrollment reports and disaggregated data at the end of every term. In addition, TCAT campuses are required to review programs annually for student program completion, job placement, and licensure pass rates. All current students, exiting students (graduate and non-graduate), alumni, and their employers complete annual satisfaction surveys. The results of these surveys are used to continually improve the quality of TCAT programs. Program outcomes are reviewed by the TCAT central office and the Council on Occupational Education. Programs that do not meet standards are placed on monitor status for continued review. Finally, all Perkins funded programs undergo additional program and fiscal reviews annually. These reviews assist in making future program decisions pertaining to grant funding opportunities, instructor training, curriculum changes, and program expansion.

The TBR conducts monitoring visits in compliance with the U.S. Department of Education's Office of Civil Rights in order to ensure that services are being offered to students in special populations.

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

Secondary Response:

During the reporting year, the state's CTE course standards revisions include increased technical skills development in social media, logic and programming, advanced manufacturing technologies, and other specific technological advancements, such as blended learning and distance learning, currently reflected in industry. Additionally, there has been an emphasis placed by the Division on non-traditional student enrollment in these programs of study.

Training was developed and provided for teachers and administrators to use appropriate technology in their CTE classrooms, as well as how to use proprietary CTE data gathering and reporting tools such as eTIGER. These trainings occurred at both the local and regional levels, as well as the division's annual Institute for CTE Educators conference.

The statewide Pathways Tennessee initiative provides local/regional technical assistance and awards multiple grants with the intent to create, sustain, and replicate seamless grade 7-16 learning pathways in high wage, high technical skill jobs. Pathways Tennessee regions are currently promoting pathways in technology-laden Health Science, Information Technology, and Advanced Manufacturing. These pathways encourage secondary systems, postsecondary institutions, and technology-related companies to collaborate in the development and offering of progressive education-to-career learning pathways for students, which are composed of vertically aligned secondary CTE programs of study, work-based learning (WBL) opportunities, early postsecondary courses, and postsecondary program offerings with local/regional industry needs. The state's annual Perkins IV Reserve Grant program includes a focus on the Pathways Tennessee model.

Lastly, the use of digital resources in all CTE courses, such as online career navigation tools found on CollegeforTN.org, were emphasized in presentations to teachers and district administrators at the Institute for CTE Educators and to school counselors at the annual Tennessee School Counselor and Administrator Leadership Institute (SCALI).

Postsecondary Response:

The OCC provides professional and technical programs in accordance with SACS accreditation standards and with program specific accreditation agencies. When appropriate, an institution provides curriculum that includes coherent and rigorous content and access to appropriate technology. Postsecondary level training on the effective use of technology for classroom and online instruction is continuous.

The OCC has also developed a web portal that allows community colleges to annually request funding and enter data for the Consolidated Annual Report (CAR). The colleges now interface BANNER data with the Tennessee Board of Regent's CAR reporting system.

Partnerships with business and industry and other state agencies have become more important in light of funding reductions. The OCC and TCAT central office primarily seek resources through non-Perkins sources for the development, improvement or expansion of technology. In 2013, the TBR, in cooperation with other state agencies, including the TDOE, the Department of Economic & Community Development, and the Department of Labor and Workforce Development, supported a legislative initiative titled the Labor Education Alignment Program (LEAP) to establish additional programs that include worksite components within a program of study. The TCAT office's E-learning Academy is an ongoing program designed to train instructors on the use of the latest mobile and emerging technology in the classroom. Instructors are trained in the development, quality review, assessment, and usage of mobile devices and applications to enhance teaching, training, and learning. Through the train-the trainer model, every TCAT instructor is trained on the essential skills needed to prepare and deliver instructional materials through this ever-changing technology.

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?

Secondary Response:

Professional development is led by the division's Talent Improvement unit, which includes CTE teacher licensing. In 2015-16, the unit continued implementation of the CTE professional development model. This model includes successful professional development components and lays out a partnership with Districts on how to best provide professional development to teachers and administrators through three mediums: state led, regionally led, and self-directed. All of the following professional development opportunities and events listed below fall within this professional development model and focus on providing high quality professional development to teachers and administrators.

New Teachers:

New occupational licensed teacher training includes attendance at a five-consecutive day event for occupational licensed teachers. Training focuses on curriculum planning and unit mapping, literacy in technical subjects, managing minor and major misbehavior, establishing classroom culture, classroom rules and procedures, assessment, and classroom management. This training is for new teachers in their first year of teaching and is offered annually in January and July. In addition to new occupational licensed teacher training, new teacher training is also provided for traditionally prepared teachers in Business, Finance, Marketing, Agriculture, Education & Training, and Human Services. These new teacher sessions focus on connecting teachers to the application of their teacher preparation program to CTE course standards and the incorporation of Career and Technical Student Organizations (CTSO) and work-based learning.

Standards and Instruction:

CTE teachers and CTE administrators are trained on CTE standards on an ongoing basis. For this reporting period, these hands-on trainings took place regionally and included unpacking standards, developing deeper cognitive classroom standards-aligned activities, and academic math and literacy components. Training also focused on identifying knowledge and skills, writing strong objectives, and creating higher level thinking classroom activities. A total of 26 professional development opportunities were provided to more than 550 teachers in the 2015-16 school year. The resources utilized in these trainings were also posted online to be utilized as local/self-directed professional development opportunities.

The division offers trainings and technical assistance to districts upon request. For 2015-16, district technical assistance visits focused on developing CTE teacher skills and knowledge on teaching the new CTE standards and included observations, feedback, problem solving around instructional planning for complex standards, and tailored district training on using research and complex texts to drive comprehension of technical standards.

Training for CTE administrators on utilizing data to make decisions was provided through monthly regional CTE Director study councils. These sessions occurred monthly and focused on how to assist directors in building goals around areas of development through a review of teacher and student level data for their districts. Trainings also included quarterly professional development workshops for CTE administrators focused on CTE and TDOE-related initiatives.

The division trained CTE administrators in a coaching model focused on developing CTE teachers. Twenty-one districts will pilot the coaching model in 2016-17. CTE directors were trained on the coaching model and were provided resources to begin this work at the district level. Districts were encouraged to incorporate this professional development for their teachers in their 2016-17 local plans.

Work-Based Learning:

A new suite of professional development (PD) resources was launched for teachers in spring 2015 and continued through the 2015-16 academic year to support the rollout of the state's redesigned work-based learning (WBL) model. Statewide rollout included new WBL policies and standards for the 2015-16 academic year. The division offered a variety of PD opportunities consisting of three main components: (a) a two-day training to certify teachers as WBL Coordinators, (b) regional professional learning communities (PLCs) to support ongoing implementation and continuous improvement of WBL programs throughout the school year, and (c) a WBL Implementation Guide paired with an online WBL Toolbox of supplemental tools and resources to assist districts in driving their own professional development for WBL. To adequately support statewide implementation, a WBL Leadership Council of expert practitioners was formed and is composed of CTE teachers, administrators, school counselors and special education educators who assist in regional PD delivery. Between March 2015 and July 2016, 923 teachers were certified in WBL through nine (9) two-day certification trainings, 143 teachers participated in WBL PLCs for program continuous improvement, and 87 teachers participated in at least four of the six regional PLCs to recertify in WBL. Additionally, professional development sessions were offered through annual TDOE conferences including the Institute for CTE Educators, LEAD Conference, Partners in Education (PIE) Conference, and Tennessee School Counselor and Administrator Leadership Institute (SCALI).

Professional Development Conferences:

Annually, the division hosts a week-long professional development conference for CTE educators, administrators, and various educational professionals in July that includes effective, research-based teaching strategies and skills. The event is called the Institute for CTE Educators. Sessions focus on CTE course standards, classroom management, academic skills writing in the CTE classroom (e.g. writing and math), data-driven instruction, differentiated instruction, serving students with disabilities, project-based learning, and career cluster content. Additional training in content offered during the Institute included: integrating CTE content with postsecondary-readiness assessments (i.e. ACT), demonstrating college and career readiness through capstone programs, accurate student counseling and career advising, work-based learning, statewide dual credit courses, and industry certifications for educators. Over 1,500 educators attended the Institute, constituting 42 percent of all Tennessee CTE educators. All regional and state professional development presentations (including sessions from the Institute for CTE Educators) were shared with teachers and CTE administrators and were posted online for future access.

Additionally, every year, the division co-hosts a statewide conference for school counselors (Tennessee School Counselor and Administrator Leadership Institute). This past year, the division provided sessions for school counselors on the following topics: work-based learning, early postsecondary course opportunities for all students, CTE programs of study, progressing students through education-to-career learning pathways, student readiness for postsecondary and careers, and academic early warning indicators. These sessions were also provided in the fall for all school- and district-based administrators in association with the department's statewide education administrator conference (LEAD).

Throughout the 2015-16 school year, the office of CTE worked with other divisions in the department to co-develop and co-plan two strands of professional development content for educators during summer 2016, including (a) preparing for student success on the ACT, career, and postsecondary, and (b) secondary intervention and enrichment. Both of these topics included training for CTE educators in grades 7-12 on how to integrate technical content with postsecondary readiness and skills development in literacy.

Resources:

CTE statewide educator externships were provided to connect school teams composed of CTE and general education teachers, school counselors, and school administrators with industries in the state of Tennessee that are aligned to the Governor's and the Department of Economic and Community Development's industry focus areas. These school teams participated in week-long externships to learn about all aspects of industry. They then created school implementation plans to be shared with other districts across the state based on the externship experiences. These cross-collaborated school plans were created to incorporate career exploration, postsecondary and career school culture, and to highlight industry skills necessary for success in a corresponding industry.

Monthly webinars were also promoted to administrators and educators and shared (both live and virtually on the department's website). Topics included: teacher licensing, progressing students through a CTE program of study, utilizing early postsecondary opportunities, implementing Pathways Tennessee model, work-based learning, Perkins local plan goal setting, and student data reporting.

Early Postsecondary Opportunities:

The division continues to expand opportunities for high school students to participate in advanced CTE coursework that can lead to postsecondary credit. In the 2015-16 school year, four CTE courses – Agriculture Business Finance, Plant Science, Health Information Technology, and Criminal Justice – were offered as part of the department's statewide dual credit pilot. Secondary teachers, who teach these courses, are expected to help their students learn and master college-level learning objectives and prepare them to sit for the end-of-course challenge exam that enables them to earn postsecondary credit if they hit or surpass the exam cut score. In conjunction with the Institute for CTE Educators, more than 200 CTE high school teachers received two days of professional development on these dual credit courses. Tennessee postsecondary and secondary faculty worked together not only to create the learning objectives, materials and resources, but also to facilitate the two days of training. In addition to these trainings, CTE directors, principals, and school counselors, who serve as statewide dual credit pilot coordinators, participated in introductory webinars, regional trainings, virtual online trainings, and challenge exam training webinars between fall 2015 and spring 2016.

In addition to statewide dual credit courses, the division also worked directly with school and district personnel, as well as postsecondary leadership, to develop dual enrollment programs of study with TCAT campuses and high schools. In the 2015-16 school year, CTE students from eight high schools in six different districts benefited from this pilot to take early postsecondary courses.

Postsecondary Response:

The OCC provided comprehensive professional development to its faculty based upon the needs of the individual and institution. The TBR Office of Academic Affairs requires each college to develop a professional development plan and to maintain the plan on file.

The TCAT central office provided a week-long professional development conference for all faculty, administrators, counselors, and staff that offered specialized training for new faculty and counselors. The conference included sessions on: adult characteristics and learning styles, presentation skills for teaching, developing and managing individualized instruction, using technology in the classroom, working with advisory councils and agencies, CTSOs, creating secondary and postsecondary partnerships, retention, articulation, dual credit, dual enrollment, career guidance, and non-traditional programs. In addition to the statewide conference, workshops on these topics, as well as certification opportunities for faculty, were provided throughout the year.

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?

Secondary Response:

The division offered 169 CTE courses as nontraditional, including 14 in middle school, out of a total of 339 (49.85 percent) CTE courses in the 2015-16 school year. A total of 119,554 students were enrolled in these nontraditional courses, representing 32.53 percent (2.65 percent more than 2014-15) of the CTE total enrollment for Tennessee. Out of the 119,554 enrollments, 82,346 unique (non-duplicated) students (8,210 more students than in 2014-15) were enrolled in one or more nontraditional course.

Out of the nontraditional course students, 38.16 percent (31,425, 19.5 percent less than in 2014-15) were identified in one of three special population categories - student with disabilities, economically disadvantaged, or limited English proficiency. An analysis shows that a similar distribution of special population students took general CTE courses, as well as nontraditional CTE courses. Students who were also enrolled in a nontraditional CTE course as an underrepresented gender and a member of a special populations category were only 2.3 percent less than other students who are a member of the special population category in general CTE or nontraditional CTE courses.

Step 3: Use of Funds: Part B

The following table shows student special population categories in general and nontraditional CTE courses during the 2015-16 school year:

(Please see the attachment starting on page 11 for table)

The division of CCTE has incorporated the requirement to provide information about nontraditional occupations into an agreement with the Tennessee Higher Education Commission (THEC) for web hosting and software maintenance on Tennessee career exploration and college portfolio development through www.CollegeforTN.org portal. This agreement ensures that the website's marketing campaign includes materials specific to encouraging and preparing students for potential nontraditional career occupations. In 2015-16, the division released CTE programs of study marketing materials for districts to use and encouraged the use of these materials with school counselors to drive the recruitment and retention of students into nontraditional occupational areas/programs.

The Pathways Tennessee model supports regional partnerships across education institutions and systems to implement education-to-career learning pathways for students based on data-driven decisions on emerging professions. In several Pathways regions, academic/career coaches have developed relationships with regional employers in nontraditional sectors and work directly with students to develop comprehensive postsecondary and career plans, especially in high-wage, high-demand industry sectors. The following is an example of a learning pathway for mechatronics used to help market this career field with nontraditional students.

(Please see the attachment entitled Question 4 to find the learning pathway example)

Postsecondary Response:

The OCC utilized Perkins Leadership funds to provide technical assistance to the community colleges. A component of the assistance each campus emphasized on the improvement of student support programs included a focus on the recruitment and retention of underrepresented genders in programs of study that lead to nontraditional occupations. Annually, several colleges hold summer camps that introduce females to STEM-related education and both genders to specific occupational opportunities.

The TCAT central office utilized Perkins Leadership funds to develop career guidance materials for all TCAT campuses to use in the promotion of nontraditional career fields to current and prospective students. In addition, the TCAT central office used Perkins Leadership funds to join the National Alliance for Partnerships in Equity (NAPE). For the 2016-17 school year, TCATs will be hosting a series of workshops focused on improving programs of study participation and completion for nontraditional students. As an ongoing activity, TCAT Career Coaches provide activities throughout a school year that focus on nontraditional occupations.

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?

Secondary Response:

The division offered 339 CTE courses in the 2015-16 school year for students to explore or learn in related occupations in order to better prepare them for high-skill, high-wage, and/or high demand careers. A total of 78,839 students (38.27 percent of total students taking CTE courses) with special needs participated in CTE coursework and benefited from the offered CTE courses.

(Please see the attachment starting on page 13 for table)

Students with special needs are given equitable access to all CTE courses and participate using the same course standards and assessments as other students. Accommodations and modifications tailored for each student are provided at the local level in accordance with each student's Individualized Education Program (IEP).

Date Printed: 07/26/2017   9

Students with special needs are also encouraged to participate in Career and Technical Student Organizations (CTSOs) youth leadership activities and competitive events. While all competitive events are open to all students, additional, tailored competitions supporting students with special needs are available at both state and national levels for most CTSOs.

Professional development on alternative methods of instruction for special population students are provided through ongoing staff development for CTE teachers. Sessions specifically on this topic were covered at the division's Institute for CTE Educators.

The division worked very closely with the department's division of special populations throughout the spring of 2016 to develop a comprehensive training and communications approach for high schools (grades 9-12) for the roll-out of the state's multi-tiered system of support for students who are falling behind in their learning. This system of support is called the Tennessee Response to Instruction and Intervention (RTI2) Framework. The framework seeks to close skill gaps for students such that they may fully access instruction in all classes, including CTE classes. The division led trainings for high school teachers and administrators on providing strong skills-based intervention, standards-based remediation, and enrichment for all students, including those with special needs. All students, including students with special needs and students concentrating in CTE, are served by the RTI2 framework.

The division also worked with the division of special populations on the state's occupational diploma and transitions framework for students with special needs. The division is expanding and promoting the use of capstone work-based learning (WBL) courses to enable students to gain hands-on work experience that promotes transferrable employability skills. The divisions jointly oversee a WBL Leadership Council that trains and certifies WBL instructors. Regional professional development for these instructors addresses differentiation of WBL to promote strong career preparation that meets the needs of all students.

Postsecondary Response:

Each community college and TCAT has an office of disabilities services that supports students with identified disabilities eligible under Sec. 504 and the ADA. Student support services are provided to other special populations, often in cooperation with other government agencies. The TBR and the TDOE conduct monitoring visits in compliance with the U.S. Department of Education's Office of Civil Rights.

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

Secondary Response:

The CCTE division provided technical assistance to districts in selecting, creating, implementing, and retiring programs of study, and in developing new and struggling teachers via telephone calls, email contact, on-site visits, and local and regional meetings. In addition, office of CTE staff traveled across the state to observe CTE programs of study and course instruction by teachers and to offer technical support for improvement. The division actively identifies districts in need of technical assistance through the utilization of cold spot analyses. These analyses layer specific data, such as attendance records of CTE directors and teachers at professional development sessions throughout the year, to identify district cold spots. Staff visits were made in the fall to cold spot districts to discuss and analyze district needs and to identify added technical assistance.

Ongoing communication through teacher email lists provide teachers and CTE directors with access to resources and materials, alerts to upcoming professional development, and highlighted successful practices. Sample lesson plans, resource lists and equipment lists aligned to specific courses, and instructional support webinars were released via the department's website and included in informational newsletters sent through teacher email lists.

For career and technical student organizations, each CTSO advisor was provided with a comprehensive Chapter Advisor Manual to offer assistance to new teachers on how to create a successful CTSO chapter. In addition to this manual, regional support visits targeting new and struggling advisors were conducted to grow CTSO chapters across the state. Monthly newsletters with support resources for growing and maintaining healthy chapters were also released via email lists to advisors. Marketing tools were created to assist districts in enhancing CTSOs at the school and local levels. Technical assistance was also provided to districts through the aforementioned cold spot analyses for districts not engaged in CTSO regional and state events.

Using the regional Center of Regional Excellence (CORE) CTE Consultants, the division offered specific technical assistance to districts for both risk-based monitoring and data reporting. Regional CTE CORE consultants are assigned one of eight regions across the state and work directly with CTE directors, administrators and teachers to provide them with the tools they need to have successful monitoring visits and audits, as well as provide assistance on any issue a district needs assistance on. This ranges from individual visits to monthly study council meetings in which they share information with CTE directors and administrators on best practices. This also includes district level data to drive proper decision-making and strategic planning. Technical assistance visits are also performed with districts who need support in the creation of their Perkins local plans.

Pathways Tennessee convenes a state collaborative (State Planning Team) that offers multi-agency technical assistance and ongoing professional development to identified regions from the following organizations:

• Department of Economic & Community Development • Department of Education • Department of Labor & Workforce Development • Office of the Governor • State Collaborative on Reforming Education (SCORE) • Tennessee Business Roundtable • Tennessee Higher Education Commission • Tennessee State Board of Education • Tennessee Independent Colleges and Universities Association (TICUA)

Pathways Tennessee assistance includes site visits, personalized facilitation to broad stakeholder groups, an annual state summit for partner regions, national conference on best practices, presentations, provision of local, state, and regional economic and labor data, facilitation of self-assessment activities, strategic planning, and assistance with creating secondary-postsecondary partnerships.

Annually, the division provides required training to certify work-based learning (WBL) coordinators who oversee student placements. This training is provided to all districts who choose to offer capstone WBL experiences for their students. Between March 2015 and July 2016, 923 teachers were certified in WBL through nine (9) two-day certification trainings. In addition to in-person certification training, the division provides professional learning community (PLC) meetings for WBL coordinators six times per year in all eight CORE regions of the state to promote continuous improvement for WBL programs. The division trains and oversees a WBL Leadership Council comprised of CTE instructors, special education instructors, counselors, and administrators to provide regional certification training and PLCs.

CTE staff provide districts with as-needed technical assistance and training on the utilization of eTIGER, including account-related matters and issues related to accurate CTE data reporting and the transfer of data between the state student information system and the eTIGER data repository. Additional resources were created for districts during the school year to aid them in the process for reporting data on newly added dual credit and dual enrollment courses as well as how to correctly mark students who concentrate in CTE in eTIGER. Over the summer, the data review process to help ensure complete and accurate data was split into two online review windows to help districts sift through and check all of their student and district level data. In addition, a secure SharePoint website was created for the division to share with districts student level data to better improve data quality. A data review attestation function was also added to help districts attest their data and allow the division to evaluate districts on their data reporting process. Several division staff, along with CORE CTE Consultants, provided technical assistance to districts to guide them through the data reporting processes.

Throughout spring 2016, technical assistance, through phone calls, emails, and on-site visits, was provided to support district implementation of the high school RTI2 framework, including how to revise student schedules to accommodate RTI2 without negatively impacting CTE programs of study. Technical assistance was also provided for teachers who taught statewide dual credit CTE courses.

Postsecondary Response:

The OCC provided multiple technical assistance opportunities to the colleges, both on-site and online. The office had a fall and a spring technical assistance meeting for eligible recipients plus on-site visits for campuses requesting assistance.

The TCAT central office provided on-site technical assistance to all 27 TCAT campuses that addressed competitive grant development, appropriate uses of Perkins funds, risk assessment and monitoring, data reporting, developing dual enrollment opportunities, and program of study implementation. In addition to onsite assistance, the office provided a series of webinars and statewide meetings to address these topics as well. In addition, the office offered a series of training sessions on the new Education Department General Administrative Regulations (EDGAR).

7. Serving individuals in state institutions

Part I: State Correctional Institutions

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

0

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

0

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

Secondary Response:

Technical assistance was provided via phone calls, emails, and materials to the Tennessee Department of Corrections educational team to assist them in choosing and implementing appropriate CTE-related courses. Special course applications were reviewed to assist correctional facilities in modifying specific course standards to address the specific needs of their populations.

The division has a partnership with the department of Corrections regarding teacher licensure. Though the department of Corrections oversees all of its CTE educational offerings, it uses the department's teacher licensing process. The Talent Improvement unit, which oversees the licensing of those individuals who teach CTE-related courses, provided professional development to wardens and principals of correctional facilities on CTE licensing requirements to ensure correctional facilities were following appropriate guidelines and requirements.

Part II: State Institutions Serving Individuals with Disabilities

Amount of Perkins funds used for CTE programs in state institutions serving individuals with disabilities:

83409

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

926

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

CTE programs were offered in three Tennessee state institutions in 2015-16, including the Alvin C. York Institute, Tennessee School for the Deaf, and three youth development centers managed by the Tennessee Department of Children's Services.

In 2015-16, the Alvin C. York Institute, which is a state operated public high school admitting students from across the state, provided eight programs of study in five different career clusters for 27 CTE courses serving 452 unique students with over 848 enrollees. Additionally, two local dual credit courses and five dual enrollment courses were offered through Oneida TN College of Applied Technology for 96 students. Out of the 452 students, 83 were identified as students with special needs. The school completes an annual Perkins local plan.

The TN Department of Children's Services and the TN School for the Deaf received funding through the Perkins Leadership set-aside of up to 1 percent of the total state Perkins allocation. Their enrollment numbers are listed in the table below. The two entities also complete an annual Perkins local plans.

(Please see the attachment starting on page 18 for table)

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

Yes

For the reporting year, no public charter schools used Perkins funds. However, technical assistance is always available and Perkins staff has fielded calls from districts with charter schools and directly from public charter schools.

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

Yes

For the reporting year, Perkins funds were used to support family and consumer sciences (FACS) courses and programs of study. These are found in four different career clusters and in eight programs of study:

(Please see the attachment starting on page 19 for table)

2015-16 student enrollment for each FACS-related program of study and the number of students who concentrated in FACS are listed below:

(Please see the attachment starting on page 19 for table)

To ensure FACS-related educators are provided with appropriate technical assistance, training, and ongoing support for their courses, the division provided: 1) specific professional development sessions targeted at FACS educators, including regional sessions focused on the new course standards; 2) specific tracks for FACS educators at the 2015 Institute for CTE Educators; 3) release of resources, sample lesson plans, and PD opportunities via monthly emails targeted to FACS educators in specific subject areas; and, 4) classroom visits of existing FACS programs coupled with local professional development sessions and technical assistance.

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?

Yes

Secondary Response:

The division implemented incentive fund grants. Incentive funds were awarded based on CTE teacher and director participation in certain division pre-identified professional development activities. Funds were utilized in accordance with Perkins spending guidelines. Districts had the opportunity to submit an application up to three (3) times per school year or until the maximum district annual award amount of $5,000 was reached. Incentive funds were awarded on a first come, first served basis up to a statewide ceiling of $150,000. A total of $120,734 was expended by 27 districts in 2015-16.

Professional development activities in the Perkins Incentive Funding application were organized into three targeted categories: Encouraged, Focus, and Priority. The chart below provides a definition of each category and the number of activities a district needed to complete in order to receive the corresponding financial award.

(Please see the attachment starting on page 20 for table)

Postsecondary Response:

No Perkins funds were used for incentive funding in 2015-16.

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?

Yes

Secondary Response:

The division did not use Perkins funds to provide CTE education directly to adults or school dropouts; however, the division did use funds to support programs shown to positively impact a student's decision to remain in school. This included the use of Perkins funds to support the seven career and technical student organizations (CTSOs) promoted by the division.

During the reporting year, funds were also used to support the development of new coursework aimed at providing career preparation and navigation, as well as skills necessary for success in high school (such as time management, communication, and study skills) through the 8th/9th grade Career Exploration course.

Postsecondary Response:

Some community colleges offer or oversee General Education Diploma (GED) programs or High School Equivalency Test (HiSET) in cooperation with the local school district. Additionally, most community colleges provide adult completion programs, which allow adults who failed to complete their program of study to achieve an academic award recognized by business and industry. Some colleges also offer English for those adults with limited language proficiency.

Five TCATs offer Adult Basic Education (ABE) training courses for adults and high school dropouts. Many TCAT programs do not require a high school diploma for entry; however, a student may enroll in the ABE courses while enrolled at the TCAT.

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?

Yes

Postsecondary Response:

Colleges provide opportunities for students to receive placement assistance through their campus career centers or equivalent offices.

Consolidated Annual Report, Program Year 2015 - 2016 Tennessee

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?

Secondary Response:

As part of the department's annual CTE course standards revisions, the number of general education (core academic) courses that were incorporated into CTE programs of study increased for a third year (for a total of 12 courses). For example, science courses are included in several Agriculture programs of study, a psychology course is included in a Human Services program of study, and an AP Computer Science course is included in Information Technology programs of study. Along with these specific courses, certain CTE courses meet general education requirements for graduation. For example, Agriscience and Veterinary Science in the Agriculture pathways, Nutrition Science in Human Services, and several Health Science courses continue to count as laboratory science credits.

All CTE courses embed aligned general education standards within the CTE standards to ensure alignment to academic content. These include both core general education courses in math, English language arts, science, and social studies, as well as general education electives, such as sociology.

Postsecondary Response:

The OCC assisted individual colleges to better integrate academic concepts within professional and technical courses through basic Perkins funding. The course curriculum redesign process focuses on co-remediation and developmental services to incoming students who require additional academic support to be successful in college level courses.

Through the TCAT Technology Foundations program, students demonstrate a better understanding of academic and technical skills by reviewing a particular skill, practicing the skill, and then applying the skill in real-world settings. Technology Foundations is integrated into all TCAT program curricula. Applied workplace skills mastery is measured by three Work Keys assessments that comprise the Tennessee Career Readiness Certificate. In addition, four TCAT campuses are piloting Core Skills Mastery as part of the Technology Foundations program to integrate academic skills into technical programs.

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.

Secondary Response:

The division's CTE staff updated their existing statewide Industry Advisory Councils composed of representatives from Tennessee companies, postsecondary institutions, and professional organizations. These councils meet several times a year to provide (1) input on CTE courses and programs of study, (2) updates to work-based learning (WBL) and other student programs, (3) support in the development of teacher resources, and (4) support for CTSO regional and state competitions. Staff also involved industry partners in certifying student mastery at specified levels, leading to capstone industry certifications.

A statewide group of key partners was created to develop the Tennessee Specific Industry Certification for Animal Science. Industry and postsecondary partners were key to the makeup of this group. Partners included Tennessee Department of Agriculture, Tennessee Farm Bureau, Tennessee Board of Regents, Tennessee Higher Education Commission, Tennessee Independent Colleges and Universities Association, University of Tennessee System, Tennessee Association of Agriculture Educators, Tennessee FFA Alumni Association and independent business owners.

In addition to statewide industry advisory councils, technical assistance was provided by staff to assist districts with the development and implementation of local industry advisory councils to support local CTE programs, including encouraging the use of regional collaboratives and multi-district councils to better take advantage of business and industry time.

In January 2016, the division launched the WBL Champions, a group of industry stakeholders, to discuss and address barriers to WBL expansion in growing industry sectors. This group paid particular attention to breaking down barriers in advanced manufacturing and developed and promoted a "Myths vs. Facts" document to address common misconceptions for employers who wish to provide training to minors. This group led a promising practice visit to Georgia to view the Southwire training program alongside CTE directors and instructors, industry representatives, and regional chambers of commerce.

The Tennessee Council for CTE (TCCTE) is a legislated advisory council composed of a diverse set of members representing various facets of industry, labor organizations, and postsecondary education. The division provides staffing services for the council and assists in promoting regional alignment between secondary CTE programs, postsecondary CTE programs, and regional industry needs across the state. Specific recommendations related to the promotion of key regional partnerships are outlined in the TCCTE Biennial Report, publicly available here: www.tn.gov/education/topic/tccte

Postsecondary institutions were again engaged as writers and reviewers of CTE course standards during the second round of CTE course revisions, as well as the development of learning objectives for statewide dual credit courses. Postsecondary partners were also involved in the development, facilitation, and hosting of specific regional professional development sessions and summer training for teachers on statewide dual credit courses.

Educator externships focused on connecting teachers and administrators with targeted industries in the state. Selected school teams participated in week-long externships to focus on various aspects of industry and then create a school plan to share with educators across the state based on the externship experience. These cross-collaborated school lesson plans for CTE and general education teachers were created to incorporate career exploration, college and career culture, and to highlight industry skills necessary for success in the corresponding industry.

Each Pathways Tennessee region must establish a regional advisory council that reflects the makeup of high growth sectors for that region. For this to be accomplished, each regional steering committee has high level membership representing local government, chambers of commerce, LWIA (regional labor) office, economic and community development regional office, directors of schools (at least three districts represented) and CTE directors, postsecondary institutions, and local/regional industry. These regional advisories work under a set of agreed-upon goals and have applied for many state and federal grants to fund projects or initiatives that support seamless education-to-career learning pathways from grades 7 through 16. The division supported this work by (1) assisting with tools and resources to align to state level initiatives and provide support for regionally led grant applications, and (2) providing data or trainings around specific needs or breaking barriers.

Through receipt of a corporate grant, the office of Pathways Tennessee finished a statewide asset mapping project on education and workforce strengths and barriers by economic development region, hosted regional focus groups with diverse external stakeholders and developed a plan for statewide expansion over the next three years.

Postsecondary Response:

Through the Tennessee Transfer Pathway initiative, over 49 academic pathways have been established for students to finish their first two years at a community college and then seamlessly transfer between the community colleges and the public universities in these Associate of Arts (A.A.) and Associate of Science (A.S.) degree pathways. Tennessee's Independent Colleges and Universities Association members have also recognized these pathways. CTE-related A.S. degrees in criminal justice, accounting, computer science, and business, have been articulated as part of the 49 pathways.

Additionally, some Associate of Applied Science (A.A.S.) programs have been articulated on an individual program/institution basis. The University of Tennessee at Chattanooga articulates its Bachelor of Construction Supervision with the A.A.S. program at Chattanooga State (ChSCC). Tennessee Technological University aligns its engineering programs with ChSCC's Engineering Technology A.A.S.

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

Yes

Secondary Response:

Division staff presented at the 2015 School Counselor and Administrator Leadership Institute (SCALI), providing a variety of sessions to school counselors on how to use the new and revised programs of study and how to strengthen appropriate career and academic counseling for students. Additional session topics included work-based learning, early postsecondary opportunities for all students, and progressing students through education-to-career learning pathways. Information was also released directly to school counselors on using the new programs of study for guidance via email lists and also through the department's website. Technical assistance was provided directly to groups of school counselors through regional visits to assist with master scheduling decision making to improve student progression through new and revised programs of study.

In late summer 2015, the division hired a Coordinator of School Counseling. Throughout the 2015-16 school year, the coordinator focused on (1) establishing a statewide school counseling advisory council; (2) creating comprehensive communications channels, including bi-monthly newsletter, comprehensive contact list, and resource website; (3) creation and deployment of a comprehensive school counseling survey to gather data on school counseling throughout the state; (4) revision of Tennessee's school counseling model of practice and standards; and (5) development of professional development resources for school counselors. (The revision of the school counseling model of practice and standards are set for approval in the 2016-17 reporting period.) The Coordinator worked closely with division CTE staff to support creation of student advising materials addressing CTE content for school counselors and hosted a 2-day professional development conference specifically for high school counselors focused on college and career advising, in conjunction with the 2016 Institute for CTE Educators.

Through the creation of the educator training sessions on improving ACT scores, career and postsecondary readiness strategies were delivered to several hundred educators throughout the summer. The division has continued its partnership with the Tennessee Higher Education Commission (THEC) to redesign and maintain www.CollegeforTN.org as the primary postsecondary and career planning tool for students across the state. Training is provided for school and career counselors to heighten their understanding of how to best use the online resource for effective annual planning for students in both career exploration and postsecondary application portfolio development. In addition, THEC provides training for CTE directors and educators on how to customize the website to ensure student planning is aligned with available CTE offerings in their districts.

Through the Pathways Tennessee initiative, 12 school districts have academic-career coaches and/or industry liaisons in place. These positions bridge the gap between school counselors and the local/regional workforce by (1) interacting with industries in local communities and assisting with sharing workforce needs, (2) bringing in industry partners for school events, (3) helping counselors with career advising, (4) helping identify vertical alignment between secondary and postsecondary programs, and in some instances, (5) playing a role in building an early college program. Pathways Tennessee districts also actively share these practices and resources with other interested districts.

Postsecondary Response:

Both the OCC and the TCAT offices provided student support services through career centers, career focused curriculum, and career coaching and guidance materials. The services focused on assisting students in such areas as job interviewing skills, resume writing, mock interviews, listing of relevant employment opportunities and internships, and opportunities to partner with businesses for job fairs, student interviews, and industry tours.

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

Secondary and Postsecondary:

The Office of Postsecondary Coordination and Alignment (OPCA), housed within the division, is charged with expanding and promoting early postsecondary opportunities for all high school students.

Starting in the 2015-16 school year, unique dual enrollment course codes were created to more effectively track student enrollment from the secondary level. This past school year, the number of dual enrollment courses lowered, but we found more students participated in these courses. See the table below:

(Please see attachment starting at page 27 for tables)

Further analysis of 2015-16 dual enrollment courses showed that several students are taking more than one dual enrollment course in a school year. See table below:

(Please see attachment starting at page 27 for tables)

Through the 2015-16 school year, the division continued to increase the courses available through a statewide dual credit pilot. In 2015-16, seven courses were offered as part of this pilot, an increase of two courses from the year before. Throughout spring 2016, an additional two courses were developed to implement in the 2016-17 school year. (Statewide dual credit courses are high school courses that incorporate postsecondary level standards, as well as aligned end-of-course challenge exams. Students who meet or exceed the established cut scores set for the exams earn credit that can be applied to any public (as well as some private) postsecondary institution in Tennessee. During the 2015-16 school year, the statewide dual credit pilot served over 6,681 students across 209 high schools. CTE courses included in the pilot as of 2015-16 were Agriculture Business Finance, Plant Science, Health Information Technology, and Criminal Justice. Faculty work groups representing Tennessee's postsecondary and secondary systems developed learning objectives and challenge exams for each statewide dual credit course. The faculty work groups looked at existing high school course standards alongside the aligned postsecondary course to determine additional learning objectives that students need to know to show mastery of the postsecondary material. See the table below for statewide dual credit (SDC) exam completion and pass rates:

(Please see attachment starting at page 30 for tables)

Through the department/TCAT early postsecondary pilot, the division and the TCAT central office facilitated relationships between high schools and nearby TCAT institutions through the spring and summer of 2015 in order to develop local articulation agreements for implementation in the 2015-16 school year. As participating students progress through targeted programs of study, they meet requirements for high school credit and postsecondary credit simultaneously. Agreements have focused on targeted occupational areas, including Diesel Technology, Cosmetology/Barbering, Automotive Collision Repair, and Mechatronics, where the state had identified an industry need or where there were opportunities to provide more rigorous instruction. The pilot is present in eight school districts, impacting students in ten high schools.

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

Secondary Response:

The division implemented dual enrollment course codes to assist districts in scheduling students for early postsecondary courses within their high school schedule. The division embeds dual enrollment and statewide dual credit courses within CTE programs of study to demonstrate the connection between secondary programs of study and postsecondary program alignment.

The CTE standards revision and the Pathways Tennessee initiative (both supported in part with Perkins funds) are focused on providing students from 7th-16th grade with education-to-career learning experiences and opportunities that are robust and vertically aligned to local, regional and state labor market needs, industry standards and requirements, and postsecondary options (refer to diagram below). This intentional and ongoing work will ensure that pathways exist for all students that allow for the seamless transition from high school to technical college to community college and/or to four-year institutions. Specific training was provided to CTE directors on how to align programs of study at the secondary level with postsecondary opportunities and occupational data in their regions. In addition to the training, the division released resources for CTE directors and teachers on the Pathways Tennessee model (as shown below) by completing sample vertically aligned pathways for each department CTE program of study. These were made available to districts and were accompanied by marketing materials to assist educators in having conversations with students about postsecondary and career opportunities post high school graduation. These graphics promoted postsecondary pathways for all programs of study, specifically demonstrating for students the career paths to continue on into postsecondary education, even in areas traditionally seen as solely technical paths.

(Please see the attachment starting on page 28 for learning pathway graphics)

Postsecondary Response:

The TBR Office of Academic Affairs (OAA) placed an emphasis on beginning a process to actively align programs of study at all levels of postsecondary.

Since 2006, TCAT students can transfer acquired credits to TBR community colleges, and community college students can transfer acquired credits to public universities through the Tennessee Transfer Pathways initiative. This initiative allows students to be assured of the transfer of all credits from the list of approved programs of study to any public community college or public university. For CTE, these pathways include such areas of study as Agriculture, Engineering, Business, Early Childhood, and Education. Other initiatives include dual admission and adult completion programs that allow students to complete the associate degree and transfer without loss of credits to bachelor degree programs of study. Currently, TCAT diploma graduates receive credit through course-for-course articulation agreements for specific academic programs.

Because all administrative funds [100 percent] and the majority of Perkins Leadership funds [85 percent] reside with the eligible agency, the TBR system splits the remaining leadership funds [15 percent] equally between the OCC and the TCAT central office (7.5 percent of leadership funds to each administrative TBR office). Because of a steady decrease in Perkins funds from the federal government, the postsecondary activities related to the questions in this section are funded by state or local funds.

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

Yes

Secondary Response:

Perkins funds are used to support CTSOs in Tennessee. This includes salary support of CTSO State Advisors (formerly CTE Specialists), who are responsible for the state-level management of CTSOs. These positions are responsible for (1) offering technical assistance to teachers/advisors to increase membership, (2) tracking membership and developing incentive programs for chapters, (3) offering high-quality local, regional, and state events to attract student participation, (4) managing and facilitating CTSO competitive events for all students, (5) creating sample lesson plans, professional development, and tools and resources to support the integration of CTSO activities into the classroom to support CTE course standards, and (6) hosting regional and state conferences and competitions for students, including students with special needs.

The use of Perkins funds also go towards (1) reimbursement for national leadership conference registration fees for first place winners in all of our state competitions, including competitions for members of all backgrounds and abilities; (2) professional service contracts for individuals who assist CTE Specialists with the planning and execution of leadership camps, state officer training, regional and state leadership conferences; and (3) annual hosting of regional and state conferences for all seven CTSOs that include academic and technical skill competitive events, leadership trainings, guest speakers, networking with postsecondary and industry representatives, and advisor professional development. New in 2015-16 was the development of a CTSO goodwill tour where leaders in the various student organizations went to postsecondary and industry sites to talk with professionals about the connection student organizations have to future careers and to promote the involvement of both industry and postsecondary in regional and state student organization events.

Enrollment and chapter numbers for CTSOs can be found in the table below. As a state, total membership increased from 56,095 to 58,207 (2,112 more, 3.77 percent), and there was a net gain of four chapters for 2015-16 year. Also notable, the chapters of each CTSO retained. And other than SkillsUSA, CTSOs membership all increase from 1.35 percent (FBLA) to 8.97 percent (TSA). TSA is the fastest growing CTSO for past two years.

Postsecondary Response:

The OCC supports various student organizations including such honor society organizations as the Phi Theta Kappa International Honor Society; Epsilon Pi Tau, an honor society for professions in technology; Alpha Beta Gamma® International Business Honor Society, Tau Alpha Pi, the national engineering technology honor society; Psi Beta, the national two-year college psychology honor society; and Alpha Sigma Lambda, the honor society for part-time students.

The TCAT central office provides funding for all TCAT institutions to be members of SkillsUSA. In the 2015-16 fiscal year, Perkins funds were used to provide a SkillsUSA state director and an assistant to work with students and advisors to improve the quality of the postsecondary SkillsUSA program. For the current reporting year, the TCAT system had the largest SkillsUSA membership nationwide with over 11,000 student members and 600 professional members. Each year, TCAT institutions provide support for the SkillsUSA Tennessee Leadership Training Institute (TLTI). Over 200 students and advisors from across the state participated in this leadership conference. Tennessee postsecondary SkillsUSA was awarded the SkillsUSA Best Award for this leadership development program. During the Postsecondary SkillsUSA state conference, approximately 2,000 students and advisors participated in community service, competitions and professional development programs.

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

Secondary Response:

The division used Perkins Leadership and Perkins Administrative funds to staff the Talent Improvement (TI) unit, which provides technical assistance, professional development and training, and monitoring oversight of the CTE programs offered throughout the state. It is required that all CTE teachers teach all aspects of industry. As part of the Risk Based Monitoring process, CORE CTE consultants, who report under the TI unit, review portfolios of CTE teachers to ensure that all nine aspects of industry are covered in each CTE course. For school districts who are identified as "in-need," technical assistance and professional development are provided through Perkins funds.

The nine aspects of industry (Business Planning, Management, Health/Safety & Environment, Community Issues, Principals of Technology, Personal Work Habits, Technology Production Skills, Labor, and Finance) are specifically aligned with a student's area of focus. In addition to covering all aspects of industry, Perkins funds support the engagement of industry through guest speaking, site visits and field trips.

In the TI model of coaching and developing of CTE teachers, the vision of excellent CTE instruction specifically addresses all nine aspects of industry and provides specific student and teacher actions, which should be taking place in the classroom to demonstrate the teaching of all aspects, as well as the student mastery of all aspects. The TI coaching model and the vision of excellent CTE instruction were implemented in 2015-16.

The Pathways Tennessee initiative used Perkins Reserve funds to hire academic-career coaches in some regions so high school students would have a higher likelihood of graduating and advancing successfully into postsecondary education and employment. Strategies include partnerships with industry leaders to increase their engagement in course curricula and competencies reviews, and meaningful work-based learning experiences. The following diagram promotes this strategic partnership, which the Pathways Tennessee initiative promotes.

The division also conducted an analysis on the industry certifications being promoted at the state level. From the analysis, the division decreased the number of industry certifications promoted by the department. The new promoted list of industry certifications had to meet a stringent set of criteria. The following are required now of department promoted industry certifications:

1)   Industry recognized and valued

2)   Aligned to a department promoted CTE course and/or program of study

3)   Transference to postsecondary

4)   Transference to high quality employment

This new set of criteria decreased the number of industry certifications promoted by the department to 39.

Currently, industry certification data are being reviewed to match students with certification data received directly from certifying agencies for the 2015-16 school year. This process will allow the state to provide more accurate data on who are earning an industry certification and will give a picture of the student participation and pass rates for schools and districts. In the interim, an analysis was conducted on a small set of industry certification data from districts who received Perkins Reserve grants to pay for student industry certification exam fees.

(Please see the attachment starting on page 34 for table)

Postsecondary Response:

Using Perkins funds, OCC provides technical assistance to the community colleges in the Associate of Applied Science degree, and other professional-technical programs of study. Most A.A.S. degrees are accredited by occupation-specific agencies. Each community college has advisory committees that assist with understanding the needs of business and industry in the college's region.

Postsecondary curriculum development is a statewide collaboration between faculty with input from occupational advisory committees, including industry leaders, who ensure the relevancy of the academic and technical skill competencies to the occupational area or career cluster. Students are required to master competencies to ensure that they have an understanding of all aspects of the industry for which they are preparing to enter. TCAT institutions schedule student industry visits on a regular basis both onsite and in the classroom. The TCAT central office reviews data collected on the Employer/Alumni Survey, which is conducted each year, for specific employment needs, trends, and wage information. Advisory Committee meetings are held at least twice a year to inform TCAT faculty and staff of the needs of industry, and in turn, faculty and staff are able to provide their students with strong experience in, and understanding of, all aspects of an industry.

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?

Yes

Secondary Response:

Capstone CTE courses provide students with the opportunity to experience "real world" situations. Work-based learning (WBL) is offered in varying timeframes from a couple weeks to an entire school year depending on the agreement between schools and business partners. New and improved capstone "practicum" courses were introduced in the fall of 2014 to give students more opportunity to experience relevant projects and authentic contextualized problems in their fourth-level (capstone) CTE courses. Beginning in the 2015-16 academic year, a CTE course entitled WBL: Career Practicum was introduced to enable students from any CTE program of study to gain hands-on capstone WBL experience using a variety of models including internships and cooperative education. This has led to the rapid expansion of these opportunities for students.

(Please see the attachment starting on page 36 for WBL table)

Educator externships were provided to connect school teams composed of CTE and general education teachers, school counselors, and school administrators with targeted industries in the state of Tennessee that are aligned to the Governor's and the Department of Economic and Community Development's focus areas. These school teams attended a week-long externship to focus on all aspects of industry and then created a school implementation lesson plan to be shared with districts teachers across the state based on the externship experience. These cross-collaborated lesson plans for CTE and general education teachers were created to incorporate career exploration, promote postsecondary and career going culture, and to highlight industry skills necessary for success in the corresponding industry.

The Pathways Tennessee initiatives continues to drive strong statewide and regional collaborations in high needs sectors. Through technical support, and where applicable directed financial support, Pathways Tennessee creates and promotes meaningful stakeholder (education, industry, government, and non-government) collaborations, which reflect the educational, economic and occupational strengths and opportunities of the state. For the upcoming reporting period, Tennessee will be expanding to four more regions to bring the total from five to nine active Pathways Tennessee regions.

The structure of a Pathways Tennessee region requires active engagement from certain business and community partners. These partners work toward a common mission to increase the preparedness of students for local and regional workforce needs, which foster collaborative projects around building new WBL opportunities, developing new articulations between secondary and postsecondary institutions, and having industry partners committed to participating in the academic priorities of their region and state.

The division offered Perkins Reserve grants to districts who are expanding industry partnerships and/or working with intermediaries to expand or improve WBL programs, which includes internships, cooperative education, and other forms of WBL to benefit students. During the 2015-16 school year, the division worked with the Tennessee Department of Labor and Workforce Development in its roll out of new WIOA guidelines focused on work-related experiences.

Postsecondary Response:

The TBR provides continuous support of partnerships between colleges and business and industry, including cooperative education, internships and faculty externships. In order to maintain currency in the field, business/industry personnel are utilized as adjunct faculty at the colleges. All A.A.S. programs of study and TCAT programs are required to have an active advisory council composed of business and industry partners. Faculty often serve as advisors and trainers in the regions' business and industry.

Middle Tennessee community colleges and TCAT institutions, in cooperation with the Workforce Alliance of Middle Tennessee, the Nashville Area Chamber of Commerce, and various business and industry representatives have been piloting a skills panel initiative in allied health, informational technology and advanced manufacturing. Encompassing 10 counties in Middle Tennessee, which includes four community colleges and eight technical colleges, each of the skill panels work to identify strategies to improve the workforce pipeline (including secondary, postsecondary and adult population), diminish in the skills gap, and improve the global competitiveness of the companies in middle Tennessee.

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

Secondary Response:

As part of the division's course standards revisions effort, Perkins funds were used to support the improvement of existing, and development of new, CTE courses. The full review of all division promoted CTE courses and programs of study, which began in 2012, concluded in 2014. Fifteen additional courses rolled out in the 2015-16 school year. The final phase, Phase III, will measure the success of students through rigorous exam options for all CTE courses and are scheduled to be started as pilot programs in the 2017-18 school year.

As the division annually reviews course and program of study offerings, division staff participate in an extensive writing and revision process used to create new, and update existing, CTE course standards. This process involves (1) traveling across the state to gather input from teachers, administrators, and industry; (2) convening groups of stakeholders to provide input; and (3) working closely with postsecondary partners to review and edit language. Revised or new courses are then presented for approval to the Tennessee State Board of Education.

Beginning in the 2013-14 school year, the division began redesigning the department's work-based learning (WBL) program. In anticipation of the State Board of Education adoption of these new WBL rules and policies, the division drafted new WBL course standards for 2015-16 implementation. This course, WB: Career Practicum, was approved in January 2015 and is considered a capstone CTE course that allows students to pursue their long-term career goals aligned to any CTE program of study. WBL experiences are now based on the employability skills valued most by Tennessee employers, who provided critical input throughout the WBL redesign process.

Postsecondary Response:

The Regents Online Campus Collaborative (ROCC) is one of the primary providers in the state for distance education opportunities for postsecondary education. It also works with the universities, community colleges and technical colleges to provide online education opportunities to students.

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

Yes

Secondary Response:

The Business Management & Administration, Marketing, and Finance career clusters continue to focus on entrepreneurship through courses and technical assistance in the development of new programs. This has included also a growing partnership with the Nashville Entrepreneur Center.

The department's WBL program allows for students, who participate in certain entrepreneurial endeavors, to earn high school credit in WBL. A primary example of this is a school-based enterprise, where students take on the primary functions of running their own businesses. Additionally, the Business & Entrepreneurship Practicum course allows students to complete a capstone experience while enhancing their entrepreneurship skills through an embedded WBL experience. This experience supports entrepreneurial student endeavors and provides them with workplace mentors who provide guidance and critical context for this learning.

Postsecondary Response:

Some community colleges offer courses, within business management concentrations, that include entrepreneurship education. Additionally, continuing education and workforce development programs at the colleges provide entrepreneurship training.

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?

Yes

Secondary Response:

The division's Talent Improvement unit provided professional development to CTE directors and district human resources departments to educate them on the different avenues to teacher licensing in CTE. These avenues allow for employment standards, endorsements, and CTE educator licensing standards to reflect industry standards. Changes to licensing have also allowed for a more seamless transition of postsecondary educators to teach in Tennessee secondary schools, as well as for industry hiring trends to be reflected in secondary teacher qualifications so that districts have a larger, more qualified candidate pool from which to recruit.

CTE career cluster consultants and CTSO State Advisors were involved in awareness workshops and training sessions for pre-service educators at local postsecondary institutions.

In the TI model of coaching and developing CTE teachers, the vision of excellent CTE instruction specifically addresses all nine aspects of industry and provides specific student and teacher actions, which should be taking place in the classroom to demonstrate the teaching of all aspects, as well as the student mastery of all aspects. The TI coaching model and the vision of excellent CTE instruction were implemented in 2015-16. Twenty-one districts will be piloting the model in the 2016-17 school year.

Research on the recruitment and retention of CTE teachers was conducted by the TI unit, culminating with the release of a report. The report on recruiting and retaining teachers was released to CTE directors to assist districts in providing support to their teachers. This research aided districts in meeting teacher recruitment and retention requirements in their Perkins local plan applications at the local level. Due to the report, and in partnership with three districts, the TI unit will be piloting effective recruitment and retention strategies in the 2016-17 school year.

A new Occupational Licensed teacher training process was refined to ensure participant satisfaction and implemented deliverables to ensure teachers were supported in their first year of teaching. Lesson plans, curriculum maps, and unpacking standards worksheets were reviewed and feedback was given back to new teachers to be able to better plan for instruction in their first year of teaching. This training is providing additional support to individuals transitioning from industry to the classroom to increase the amount of CTE teachers retained in the first three years.

Postsecondary Response:

The OCC and TCAT central office require initial and ongoing professional development for all faculty members, including adjuncts. Each year, TCAT institutions host a week of in-service for statewide professional development for all faculty, staff, counselors, and administrators. In addition, the TCAT central office provides comprehensive professional development for new faculty and school counselors through the new Faculty and Counselor Orientation program. The program includes sessions on: adult characteristics and learning styles, presentation skills for teaching, developing and managing curriculum, using technology in the classroom, working with advisory councils and agencies, career and technical student organizations, creating secondary and postsecondary partnerships, student retention, articulation, dual credit, dual enrollment, career guidance, and non-traditional programs.

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

Yes

Secondary and Postsecondary Response:

The division works in partnership with THEC to provide access to the www.CollegeforTN.org portal, which offers comprehensive postsecondary planning and occupational information for students. This free resource can be customized to meet the needs of CTE directors, teachers, counselors, and most importantly students. The website integrates with occupational data and planning information from other resources, such as the bureau of labor statistics. Career planning resources include interest inventories, career exploration tools differentiated by career cluster, and job search tools (such as a resume builder and links to job postings). The website has also been expanded to address needs of adult learners for occupational and employment information.

Through the division's annual Institute for CTE Educators, the office of Pathways Tennessee, in conjunction with the Department of Economic and Community Development (ECD), highlighted key clusters and postsecondary programs in each of the state's nine economic regions that districts should consider promoting, utilizing the state's Labor and Education Alignment Program (LEAP) Report, which is released by ECD.