

Consolidated Annual Report, Program Year 2015 - 2016 Montana

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

Postsecondary Response:

Staff at the Office of the Commissioner of Higher Education (OCHE) continues to work with MTW Solutions to refine the E-Grants management system for postsecondary applicants by shaping the software to fit specific Perkins requirements. The improvements and changes made allow local administrators to better allocate and track funding to benefit campus CTE programs. Upgrades made this year allowed for multiple reviewers to access applications, which resulted in faster turnaround for approvals and feedback. The system also now allows for end-of-year reporting to be streamlined by combining quarter reports throughout the year into a single document for OCHE to view from each campus.

Secondary Response:

RPOS partner schools offered the pilot NOCTI CSTN 100 assessment in spring 2013. In 2014 the assessment was revised based on input from the Montana subject matter expert (SME) team and the statistical analysis of NOCTI. The revised assessment was presented to construction students from Great Falls High School, CM Russell High School (Great Falls), Helena High School, Helena Capital High School, and Billings Career Center. Each high school organized the written portion of the assessment. Students who passed the written were eligible to take the performance assessment, offered at a partner two-year college. Performance assessments were presented at Great Falls College, Helena College, and City College of MSU Billings. The same scenario took place in the spring 2015, with the assessment and performance process completed by the partner LEA high schools and colleges

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

Postsecondary Response:

The position of Compliance and Workforce Data Analyst has been maintained, which allows OCHE to keep the collection and analysis of Perkins and workforce data, at both the state and local levels, a priority. The Compliance and Workforce Data Analyst spends 50% of their time working strictly Perkins and workforce data collection, analysis and reporting.

Secondary Response:

All personnel from the Montana OPI CTAE Division have been participating in the development of a new Data Collection system that all Montana LEAs report student data to the State Agency. Among the new reports is the continued development and implementation of an electronic Secondary School Student Transcript. This document will provide this office with the ability to query information about the identification of CTE Concentrators. This ability will enhance our data point validity and provide a more reliable identification that will allow better understanding of CTE Programs and their value.

This CTAE Division has also been integrally involved in the creation of an updated iteration of the Montana Career Information System. Through student focus groups, LEA workgroups, the CTAE Division has provided invaluable feedback to programmers in order for them to create a Student Career Guidance platform that include Big Sky Pathways and better links LEA Student Accounting programs to the Montana Career Information Web Based site.

Consolidated Annual Report, Program Year 2015 - 2016

Montana

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?

State Response:

The Office of the Commissioner of Higher Education (OCHE) assesses Perkins-funded CTE programs in several ways, including site visits, bi-weekly technical assistance calls, annual professional development and training for grantee campuses, performance-based funding for increased focus on target areas, and required quarterly fiscal and programmatic reports.

OCHE conducts a monitoring review of at least 20% of the grantees each year. The monitoring visit provides an opportunity to institutions to receive technical assistance, foster continuous improvement, and develops a better understanding of performance, operations, and issues facing CTE. The monitoring process involves:

1. Application of a risk assessment tool to determine which institutions will be visited.
2. Reviewing the institution's process for achieving goals and objectives.
3. Analysis of fiscal practices.
4. Review of the way data is gathered, reported and used.

Each year, the Perkins Program Manager will evaluate all institutions receiving Perkins funding using a risk assessment tool. Institutions will be chosen for monitoring visits based on higher risk values, or if having not had a recent monitoring visit. In 2015-2016, the following colleges received monitoring visits: City College, Gallatin College, Helena College and University of Montana Western. There were no major findings at any of the colleges.

OCHE also conducts MOA onsite reviews for compliance with Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act of 1990 and Guidelines for Elimination Discrimination and Denial of Services on the Basis of Race, Color, National Origin, Sex and Handicap in Vocational Education Programs. There were no major findings at any of the colleges.

Montana University System (MUS) utilizes performance funding as a strategy to help reach the State's goal of increasing the percentage of the population with a higher education credential from 40% to 60%. The primary objective of performance funding is to improve student learning and attainment outcomes. To help guide the MUS Performance Funding initiative and the development of outcome metrics, six priority target areas have been identified. The target areas are intended to drive metrics that vary by institutional type, as well as promote mission differentiation and innovative institutional-level strategies.

1. Increase success of under-represented student populations (ex. economically disadvantaged, American Indian, and veterans);
2. Increase early college access for Montana high school students;
3. Improve student success in freshmen year (ex. freshmen/sophomore retention, improve success of remedial students);

4. Increase the number of students transferring from 2-year to 4-year campuses;
5. Increase the number of students completing degree and certificate programs, particularly in niche program areas with significant economic impact to Montana; and
6. Grow graduate education and research capacity consistent with institutional missions.

There is special weighting in the allocation model of successes by specific access groups, specifically Pell-eligible students, American Indian students, non-traditional age students, and veterans. Weights will be determined in the design of the allocation model for completion and retention metrics for both undergraduate and graduate students.

Postsecondary Response:

Each college has Industry Advisory Committees, which monitor the course content for relevancy, effectiveness and proper scope. Several colleges have a Perkins Committee that will meet periodically to discuss activities, share information on best practices, and advice about projects that will be effective.

All Perkins-funded campuses complete quarterly and annual reporting of activities and expenditures, as well as a review of previous grant-cycle programs prior to writing their grant application each year.

All of the institutions that make up the Montana University System are required by Board Policy 303.3 (<http://mus.edu/borpol/bor300/303-3.pdf>) to conduct internal reviews of their academic programs to ensure program quality and effective stewardship of resources. All programs listed in the MUS official degree and program inventory, except for certificates of 29 credits or less, must be reviewed at least once every seven years. The review schedules are filed with OCHE.

Secondary Response:

Every high school district receiving Perkins funds completes an 'End-of-Year' report before the new grant application is approved. All required accountability data is also submitted prior to new grant approval. The 'End-of-Year' report asks districts to review the prior year's Perkins expenditures and asks them to assess each CTE program as to the effectiveness of the monies spent. In addition to the district's self-evaluation, the secondary CTE State Program Specialists use the 'End-of-Year' report to identify areas of weakness in specific program areas. This gives Specialists specific information to help them determine what technical assistance they will give to assist our schools. On the state level, a high school-specific "report card" shows all Perkins core indicators of performance and how each high school compares to the state-negotiated goal and threshold target. A summary of the performance indicators is listed inside the grant application. The disaggregated data available to each school comes from the statewide student data system called "Achievement In Montana", or AIM. AIM data assists schools and our OPI CTE State Program staff in analyzing their data to make future decisions and improvements. The Perkins Purchasing Manual and other technical assistance documents are available on the Secondary CTE webpage to provide guidance to local districts on proper usage of Perkins funds. Secondary CTE State Program Specialists perform Perkins program reviews of up to 20% of districts each year on a rotating basis.

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

State Response:

The Montana Digital Academy worked with EdReady, a curriculum from the National Repository of Online Courses, to help students boost their scores on placement exams so they can begin their post-secondary education without needing remedial help. The Montana Digital Academy works with Montana school districts to expand educational offerings and the EdReady program shows students where they lack readiness and help them create improvement plans. Middle and high school educators use EdReady to evaluate their programs and help place students in appropriate courses. The Montana Digital Academy also helps in offering online dual credit courses to students from anywhere in Montana.

The E-Grant online grant management platform was redesigned to incorporate quarterly reports and year-end reports. Because reporting mechanism continued to improve this year, OCHE was able to withdraw and analyze information from campuses in a more timely and efficient manner.

Postsecondary Response:

MSU-Northern's Nursing Program purchased an Alaris programmable Pump System as well as Sigma Spectrum IV Infusion Pumps and Software that allowed nursing students to develop the cognitive skills to program any type of intravenous system and equipment in the safety of a laboratory setting prior to a clinical setting.

Highlands College became a Microsoft Office IT Academy and Testing Center. The IT Academy provided curriculum and training to prepare students to take Microsoft Office Certification or Microsoft Office Excel Exams. The college purchased 50 Microsoft Office Specialist Study Guides for students to utilize in class and the library and will be used for multiple semesters.

City College purchased a 'Pass Thru' module for their Automotive program, which assists faculty in effectively teaching computer programming, how sensors work, graphing and waveforms to their students. This module helps automotive students understand more components of how a car works. For example, an oscilloscope graphs waveforms that allow students to visually see how a sensor and actuator are working.

Missoula College provided partial salary for their instructor of the Cybersecurity Professional Certificate. The program adds four new online courses each year in order to build on the AAS Networking Degree.

Salish Kootenai College reviewed the technology components of its CTE programs. Program Advisory Committees (PACs) for each CTE program provided recommendations for ensuring that programs have access to or own adequate technological resources so that program completers are prepared for current technologies in the workplace. SKC embedded the use of career search technologies in CTE programs. SKC ensured that all students in CTE programs were familiar with job search engines, and were able to search and apply for jobs using online technology. This effort was particularly emphasized in Certificate of Completion and Associate of Applied Science programs, which do not require as much computer use as the Associate Degree programs.

Miles Community College improved and expanded the use of technology in their CNA and Associate of Science in Nursing programs by integrating the use of computer tablets into nursing labs. By integrating the use of computer tablets into the nursing labs, program faculty and students benefitted by having the ability to quickly access didactic/theory related course materials and online/Internet resources to enhance and reinforce practical learning taking place in clinical lab exercises and simulations. Similarly, video recording technology integrated into standard computer tablets enabled faculty and students to easily record nursing lab activities that are then replayed/reviewed during didactic/theory classroom sessions & used as student study aids.

Miles Community College's Automotive Technology Program purchased an automotive scanner, which enabled automotive students to diagnose and repair computer related problems on newer domestic and foreign automotive models.

Secondary Response:

The OPI continues to maintain websites and uses many different electronic methods to clearly communicate Perkins and CTE-related information with the secondary field. Our newest is the online statewide longitudinal education data system called 'Growth and Enhancement of Montana Students' or GEMS. In addition to general CTE and Perkins information, the e-mails communicated data collection requirements, submission of high school CTE Student Participation Reports (which are used to determine program approval), as well as an online link to complete an 'Intent to Apply' for Perkins monies for the coming year. School level report cards have now been moved to our website for LEA utilization and program review and improvement.

In 2015-2016, the OPI continued to utilize mass distribution e-mails and electronic monthly summaries to superintendents and those subscribed to the Perkins/CTE distribution list to provide up-to-the minute information regarding Perkins and CTE-related information.

Business Education Specialist Eric Swenson conducted three (3) one-day regional professional development workshops in August 2015 for Montana's secondary business educators. These workshops included strategies for Literacy-in-CTE for implementation into the business education curriculum as well as instruction in apps and online resources for use in business education and resource for teaching coding and computer science principles. The workshops were held in Billings (August 5, 2015), Bozeman (August 6), and Kalispell (August 8).

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?

State Response:

A Big Sky Pathways Coordinators Training was offered in Helena September 9-10, 2015. The topics covered were: Best Practices in Cluster Events and Cluster Seminars, Montana School Counselors Association, Insights from E-Grants in Secondary, E-Signatures and the Pathways Process, OPI Specialists: Supporting CTE Education in Montana, Grant Guidance and Accountability for FY 16, Dual Enrollment in the State of Montana, CTE Dual Enrollment, HealthCARE Montana, Connections in Pathways, Adult Pathways and Big Sky Pathways Big Picture Discussion.

An additional Big Sky Pathways Coordinators Training was offered in Helena April 7-8, 2016. The topics covered were: Developing Contextualized Pathways for Adult Learners, Addressing Issues in Pathway Development, Deconstruction/Reconstruction of a Pathway – DACUM Activity, CTE Dual Enrollment Building within Big Sky Pathways, Connecting Faculty and Teachers – Models for Curriculum Alignment and Collaboration, Building the Student Advising Framework for Dual Enrollment Students, Streamlining the Dual Enrollment Application and Registration Process, and Creating College in the High School.

A Perkins Coordinator Training was offered in Helena October 1-2, 2015. The topics covered were: Grant Management, Montana Education Policy Agenda, HealthCARE Montana, E-Grants, Partnering with Big Sky Pathways Coordinators, Sector Strategies, Quarterly Reports, Adult Basic Education and WIOA, Perkins Accountability (TSA & CAR), Perkins Report Cards, Perkins Three Year Plans, Perkins and Main Street Montana, Perkins and National Guards.

Biweekly technical assistance calls were held for both Big Sky Pathway and Perkins Coordinators.

Postsecondary Response:

The Montana School Counselors 2016 Spring Conference was held April 14-15, 2016 in Bozeman. For the past two years, one full day has a dedicated Career Track with activities for school counselors to experience a specific Career Cluster, and this year Health Science was the theme. Counselors were given an overview of the curriculum and brochures for all health-related programs in the state from certificates to master's degrees. Counselors were introduced to work-based learning opportunities for students, including day-long hospital events and a week-long summer camp to students interested in exploring a career in health care. Counselors were then given the opportunity to 1) tour an ambulance and practice some of the activities an EMT would do on a daily basis; 2) practice phlebotomy; 3) try their hand at intubation with a medical student; and 4) work with a physical therapy assistant on routine activities. The idea was to expose counselors to myriad healthcare activities that take place in high school classrooms across the state and lead to high-wage, high-skill and high-demand careers.

Flathead Valley Community College hosted a teacher's camp, Week 1 running June 13-17 and Week 2 running June 20-24. 105 area public school teachers earned more than 100 credits by participating in Teacher Camp. The evaluations completed by these teachers indicate an extremely high satisfaction rate (average of 4.8 out of 5). Also, the teachers reported that what they had learned would be impactful in their classrooms (average 4.7 out of 5). Some of the topics covered were: Supporting Students with Extreme Behaviors, Technology for Teachers: Integrating Technology into Every Lesson, and The Workshop Model.

Flathead Valley Community College hosted a weeklong Welding Summer Camp. The camp allowed for teachers to test for welding certifications and potentially complete the work experience needed to teach welding for dual credit in their high school. While attending, teachers also learn about registered apprenticeship programs as well as start on or complete pathways paperwork. Teachers leaving with certification can test students, allowing them to complete Industry Recognized Credentials.

MSU-Northern provided Job Shadow/Externship for secondary instructors with college faculty. Six secondary instructors were provided the opportunity to tour programs, visit with post-secondary faculty one-on-one, and observe classes at the college. This activity included information on labor market data, career pathways, NCCER introduction, Training and Certification for Manufacturing Pathways secondary instructors.

Helena College offered Snap-On Tool Training, where instructors had the opportunity to select the tools targeted for training.

Helena College also hosted a Career Cluster Seminar. These events expose teachers and counselors to multiple pathways in different college program areas. A recent health science event, for example, gave insight into Montana's highly competitive nursing programs and the allied health fields. In attendance were representatives from facilities that employ nursing, medical assisting, medical coding, and mental health direct care graduates. The seminar format included high school teachers, counselors, and college instructors, as well as business/industry partners and program graduates. After a shared information session, the seminar broke into pathways and HealthCARE Montana groups. Pathways documents were completed following the seminar.

Big Sky Pathways coordinators from all of MUS colleges that had BSP positions staffed attended the Montana Association for Career and Technical Education (Montana ACTE) institute in October, 2015 in Billings. The coordinators sent staff, presented, and/or participated as vendors at MT ACTE. Colleges, several of which bring faculty to present, serve as a resource for educators on BSP and CTE dual enrollment. Additionally, Pathways coordinators participated in the Montana Postsecondary Educational Opportunities Counsel fall counselor update and attended regional college fairs hosted by the Montana Post Secondary Educational Opportunities Council (MPSEOC).

Miles Community College offered a Summer Teacher's Institute that provided continuing education, networking opportunities, and opportunity to earn either OPI units or one college credit. Some of the workshops included: Integrating Technology for the classroom, Teaching Elements of Design, and Differentiated Instruction.

Miles Community College also hosted an Educator's Conference October 15-16, 2016. Some of the workshop topics offered were: Research and Present, Working with Photoshop, Grant Writing Basics, Classroom Websites, and 9 Essential Skills for the Classroom.

Secondary Response:

On October 14, 2015, the 'New CTE Professionals Workshop' was held in Billings. This free, one-day, professional development opportunity was designed specifically for CTE teachers in their first, second, or third year of teaching. Topics of training included Perkins funding, State CTE funding, Advisory boards, professional organizations, Montana's Big Sky Pathways Initiative and the development of Programs of Study, CTE and program-area standards and guidelines, and Career and Technical Student Organizations (CTSOs). A total of 41 CTE teachers attended, five OPI Staff attended, and seven CTSSO State Directors attended.

Business Education

On October 15, 2015, Business Education Specialist Eric Swenson presented a professional development workshop for Montana's business educators in attendance at the Montana Association of Career & Technical Education Fall Institute. The workshop, titled OPI Update, provided attendees with resources and information from the new Montana Business Education Curriculum Resources. Topics included the Framework for Business Education in Montana, the Montana K-12 Course Codes, the National Standards for Business Education, the Common Career Technical Core, and updated Business and Marketing Education Program Guidelines.

On December 10, 2015, Business Education Specialist Eric Swenson presented a professional development session for the business education teacher preparation program at the University of Montana in Missoula. The session included information pertaining to national and state business education and career and technical education curriculum standards and guidelines, Perkins and state career and technical education funding and related requirements, Montana's Big Sky Pathways initiative, and ideas and resources for starting and advising a career and technical student organization.

In addition, Business Education Specialist Eric Swenson also provided training and instructional support to the students of the business education teacher preparation program at the University of Montana-Western in Dillon throughout the fall 2015 semester. Some the topics covered included principles and philosophies of career and technical education, business education curriculum development and resources, developing Big Sky Pathways, using the web-based career guidance system Montana Career Information System (MCIS), advising a Business Professionals of America or DECA chapter, and the importance of membership and active participation in professional organizations.

In August 2015, three (3) regional professional development workshops were held for Montana' secondary and post-secondary business education professionals. The workshops, titled Get Fired Up, Get Inspired, and Get New Ideas provided opportunities for Montana business educators to gain hands-on training, instructional resources for the classroom, and to network with colleagues and new business educators from all across the state of Montana. The workshops were held at Skyview High School in Billings (August 5), Bozeman High School (August 6), and Glacier High School in Kalispell (August 8). Each workshop focused on resources and 22 instructional strategies for integrating literacy instruction within the business education curriculum. The Literacy-in-CTE session was facilitated by the Montana OPI Business Education Specialist Eric Swenson and Shields Valley High School business teacher Mitzi Richards utilizing materials development by the National Research Center for Career and Technical Education. Additionally, Business Education Specialist Eric Swenson provided all attendees with a new Montana Business Education Curriculum Resources binder which included the new Framework for Business Education in Montana curriculum guide, the listing of all Montana K-12 course codes and descriptions used for OPI school staffing reporting in TEAMS, the new National Standards for Business Education, a copy of the Common Career Technical Core standards, and a draft of the new Montana Secondary Business and Marketing Education and Secondary Cooperative Work Experience guidelines. The workshops also provided opportunities for business educators at each host school to share their expertise and best practices with participants as well. At Skyview High School, Molly Barta (Skyview High School) and Nicole Bogunovich (Billings West High School) presented a Technology and Tools for the Business Education Classroom session focusing on applications and online resources for business education-related subject for use on notebooks/iPads as well as simulations to enhance and reinforce student learning. At Bozeman High School, business educator Kerri Cobb presented a Teaching Coding—Instructional Strategies and Resources session. Kerri shared with the business educators many of the materials and resources she uses for teaching her coding courses as well as invited two industry professionals for the Montana Programmers Association to work with the educators. Three members from the Glacier High School business education department—Chere' Anderson, Gray Bennett, and Jareth Wilson—showcased two of their department's curriculum offerings. Jareth presented instructional strategies and resources based upon the new coding courses being offered at Glacier High School for the 2015-2016 school year and discussed plans for future offerings. In the final session of the day, Chere' and Grady shared with attendees ideas and resources they have developed for teaching personal finance. All three workshops were offered at no cost to attendees.

Family & Consumer Sciences Education

During the month of July 2015, OPI Program Specialist, Megan Vincent, along with Montana State University Family & Consumer Sciences and Montana Family, Career & Community Leaders of America, offered a five day professional development conference "A Community of Practice" for 40 Family and Consumer Sciences (FCS) educators. The conference was a venue to help enhance current FCS curriculum for our student's future needs by addressing well-being, sustainability, foundational STEM literacy, 21st century employability skill development, academic integration and college and career readiness. Speakers included the conference organizers as well as university faculty members, FCS professionals, and business/industry experts.

In September 2015, Family & Consumer Sciences (FCS) Education Specialist Megan Vincent presented a professional development session for the Family & Consumer Sciences teacher preparation program students at Montana State University. The session included information pertaining to school funding, meeting local, state and national standards, national level FCS work, program promotion, advocacy and FCS connections to STEM. In April 2016, a second presentation was given to the Family & Consumer Sciences teacher preparation program students at Montana State University. This session included additional coverage of Carl Perkins and State CTE funding, job hunting and networking in the FCS field, CTE/FCS support, school staffing, program curriculum/schedules, CTE Advisory Councils, and general resources.

In October 2015, FCS Education Specialist Megan Vincent presented an OPI update to all FCS teachers in attendance at the Montana Association of Career & Technical Education Fall Institute which included important deadlines, updates and resources. Megan also presented an individual workshop on unifying the plethora of resources for FCS classrooms. In April 2016, Megan Vincent presented a breakout session workshop on current FCS/CTE updates in Montana for FCS professionals at the annual Montana Association of Family & Consumer Sciences conference.

In June 2016, Missoula College offered its annual Tips for Teachers Culinary Arts class. This five day class was led by Chef Aimee Elliott and Chef Thomas Campbell. The class helped FCS teachers to build a repertoire of lessons on nutrition including reviewing basic nutrition concepts, designing delicious, attractive menus, learning to select, store and prepare ingredients, and discussing contemporary nutrition issues.

Agriculture Education

On February 3, 2016, 45 Agriculture Education teachers attended a workshop on Agriculture Experience Tracker (AET). AET is the new program that all of the Ag programs in the state use for record keeping.

On June 22-26, 2016, approximately 52 Agriculture Education teachers met for their summer Update Conference in Great Falls, Montana. Professional Development sessions focused on secondary Ag Ed curriculum, especially CAERT, plant grafting and other horticultural topics.

Health Science Education

Health Science teachers were offered several professional development options for 2015-2016:

CreativEd Services was contracted to work with health science teachers on brain-based active learning Oct. 2015

Anatomy in Clay also led a two-day workshop for health science teachers Oct. 2015

The Health Science Education Specialist planned and presented a Health Careers day event during the MT School Counselor's Conference Apr. 2016

Biomedical Science teachers had a two-day symposium on Biomedical Science curricula and post-secondary pathway options at the University of MT, May 2016

Professional development was offered to Health Science teachers via live/recorded webinars. Topics included Virtual Surgeries, Health Science Common Core Cross-walking, Technical Skill Assessment discussions, and lessons for I-pad use.

In September, Renee Harris presented a workshop on Work-Based Learning for hospital Human Resource directors and health educators. The focus of the workshop was on providing a better understanding of what is being taught in health science programs, share work-based learning documentation and preceptor training in order to offer expanded job shadowing and/or internships.

Industrial, Trades, and Technology Education

Don Michalsky, ITTE Specialist, arranged for Sergeant Cody Saranto, United States Marine Corps, to present career and non-traditional employment opportunities currently available in various branches of the Military. Sargent Aranto is a 2006 graduate from a Montana High School, joining the Marines in 2007. For two years he was assigned and trained with the 2nd Fleet Antiterrorism Security Team, in Yorktown Virginia, and later deployed to Bahrain, Kuwait, and served three times throughout Asia and Afghanistan. His current duties include supporting community projects and maintaining community relations while assisting young individuals in pursuing post high school education and career opportunities. His presentation emphasized the importance of leadership skills and the chain of command within any organization or professional environment. This presentation was made available to students and teachers during the annual SkillsUSA State Leadership and Skills Conference on the campus of MSU-Northern, April 4-6, 2016.

Numerous Professional Development opportunities and mini-sessions were provided by business and industry, and made available to teachers, parents, and chaperones at the National SkillsUSA Leadership and Skills Conference in June, 2016.

The annual TEKNOXPO (techno-expo) conference was held on April 28, 2016, for secondary teachers and students. This conference gave them the opportunity to experience programs available at MSU-Northern-College of Technical Sciences. Activities focused on Agriculture, Automotive, Construction and Diesel Technology careers. Teachers had the opportunity to interact and attend presentations from several major companies representing a variety of career areas. Many of the subjects addressed by industry were directly related to student preparation for entry-level employment within the correlated industry. Participating companies supplied virtual and physical equipment for teachers and students to explore a hands-on experience, including actual heavy equipment operation. The companies also offered tailored sessions for those students seeking additional career information. Basic entry-level skills were a recurring theme as well as emphasis on non-traditional employment opportunities.

June 9-10, 2016, a 16-hour Mastercam professional development workshop for teachers was held in conjunction with Northwest Technical Products. Teachers learned Computer Aided Design (CAD), Computer Aided Manufacturing (CAM), and Computer Numerical Control Machining (CNC) using the latest manufacturing processes while developing a manufacturing unit that could be implemented within their own programs. 2D and 3D machining processes were covered using the CNC mill, with emphasis on creating high speed tool-paths.

A 40-hour Welding Certification Professional Development Workshop was held at Flathead Valley Community College on June 13-17, 2016.

The Welding Workshop provided high school teachers the opportunity to earn welding certification that would help them prepare their students to earn Dual Credit in certain designated postsecondary coursework. All high school teachers who participated were able to earn at least one American Welding Society (AWS) certification, which is achieved using strict parameters and passing a destructive test performed by an AWS certified inspector.

Teachers who earned an AWS certification, are qualified to prepare their own students to earn a certification by arranging for an AWS certified inspector to be available for students to participate in the testing process at a later date.

A multiple of industry sponsored Snap-on Tools Certification Training Workshops were offered at the Helena College Airport Campus on June 13-17. The trainings were open to teachers, students, and former college graduates. Due to the variation and the overlapping scheduling of the training sessions, participants could only attend a total of 40 hours of training in selected areas during the weeklong event. The workshops varied in length and depth of instruction, with the Automotive section requiring a certain level of prior experience necessary to take full advantage of the lessons. A brief listing of subjects covered were: Automotive Scanner/Oscilloscope Diagnosis, Precision Measurement, Mechanical and Electronic Torque, Multimeter and Basic Electricity Teaching Tips.

The Montana Association for Career and Technical Education (Montana ACTE) held an institute in October of 2015 in Billings. The institute, entitled "Fast Track to Careers" highlighted CTE as a strong, driving force behind the future success of Montana students. Keynotes and primary sessions focused on the Common Core and the role of CTE within the Common Core. Approximately 137 career and technical educators were served: 43 in FCS, 20 in industrial technology, 31 in business, 6 in agriculture, 3 in health science, and 14 administrative staff.

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?

Postsecondary Response:

MUS-Northern hosts an event called TekNoXpo that gives high school students the opportunity to talk with college students, faculty, and leading business and industry partners from around the US. Roughly 195 high school students participated in the event and were able to interact with 14 industry partners with 24 representatives total. Some of the events students were able to participate in included: the equipment rodeo (including skid steers and backhoes), chassis and engine dyno, the production of bio-fuel, the advancements on balers and loading twine, the advancements in plotting/measuring acreage, 8 automotive stations, the latest technology in plumbing and marshmallow shooters, wiring a switch and light, building bridges, and nursing.

Helena College hosted Women in Gear, an event where 30-40 students in 10-15 parent participants had hands-on experience and viewed demonstrations in Automotive Technology, Diesel Maintenance, Aviation, Welding, Computer-Aided Manufacturing, Fire and Rescue, Information Technology and Health Science. The day featured information about career pathways and panelists working in these fields. A tour of the Boeing Plant was a highlight of the options offered to students.

The State of Montana awarded \$1,000 scholarships to state high school graduates who majored in science, technology, engineering, math or healthcare at a Montana College. The scholarships were intended as an incentive with the goals of increasing the number of Montana graduates in STEM fields and boosting the state economy.

Great Falls College had more than 150 students and their teachers/counselors attend their Trades Rodeo, where they were able to explore the trades programs offered by two colleges in addition to union apprenticeships and the military. High school instructors and counselors learned more about the programs that are offered and got to visit the Big Sky Pathways coordinator about dual credit and pathways opportunities for their students. Basic welding, bending pipe, CPR practice were some of the popular activities.

Missoula College hosted the Norco/Miller Expo in March 2016, with over 100 students in attendance. Students from Darby Job Corp were in attendance as well as High Schools from Missoula County, Mineral County, Ravalli County, and Sanders County. Counselors toured our facilities and learned about the programs. There were also some parents in attendance asking questions and getting involved as well. This event really helped revitalize interest in industrial pathways, especially manufacturing. Almost all of Missoula College Faculty members from the Industrial Technology Department participated in showing the students around, assisting in demonstrations, or doing demonstrations. There was participation from the Carpentry Program, Diesel Program, Heavy Equipment Operations Program, Recreational Power Equipment Program, Machining Program, and the Welding Program.

Secondary Response:

Non-traditional funds were used to support the salaries of the Educational Specialists in the career fields of Family and Consumer Sciences, Health Science, and Industrial, Trades, and Technology Education. In addition, funds were utilized to support the travel expenses related to leadership conferences, regional teacher trainings, as well as materials created and purchased to support the work done to attract and retain non-traditional students into non-traditional career areas.

Family & Consumer Sciences - non-traditional monies were used to support the Montana FCCLA State Leadership Conference to encourage participation of males in the Family & Consumer Sciences field. During this conference, a one day-long career exploration tour was offered in Hospitality & Tourism. Hour long educational workshops were also offered including topics such as stepping up to be a leader, Farm to School Harvest of the Month, empowering youth to lead, building your personal leadership brand, creating your personal vision, networking & icebreakers, seat belt convincer, the Montana Money Magic program, dancing as an activity, interior design, Montana Career Information System, and the science of tempering chocolate. New to the conference, was the College & Career Readiness Fair which highlighted the non-traditional fields in FCS and other CTE areas to all attendees. Montana's male national FCCLA officer was an integral part of the conference bringing attention to the possibilities for male students in FCS and FCCLA. He served from July 2015 to July 2016. The FCS State Program Specialist, Megan Vincent, along with Montana State University and Montana Family, Career & Community Leaders of America offered a Family & Consumer Sciences Profession Development Conference in Bozeman in July of 2015 with approximately 40 attendees. Woven throughout these sessions were discussions on creating gender neutral programs/classrooms, increasing certifications that appeal to males in the area of Culinary Arts, and ways to market the FCS curriculum to both genders to work on increasing male enrollment in the FCS classrooms.

Health Science Education - All health science teachers are providing career information by introducing non-traditional role models such as male nurses, male-female Life-Flight teams, and male radiologic technicians. This was done by collaborating with hospitals for job shadowing and through specific recruitment of HOSA judges for the State Leadership Conference that were representative of non-traditional areas.

Industrial, Trades, and Technology Education - The annual SkillsUSA State Leadership and Skills Conference was attended by about 38% female students, who competed in not only Leadership Contests, but in Automotive Technology, Carpentry, Welding Technology, and Power Equipment Technology Contests. In addition, 36% of high school students who participated in the MSU-Northern TEKNOXPO professional development activity in April 2016 were also female students.

Several former MSU-Northern female program graduates, who are currently employed in non-traditional fields, presented occupational information at the TEKNOXPO (techno-expo) mentioned above. These female presenters provided facts about employment opportunities for females in the Industrial Trades and Technology Education Pathways—specifically in Automotive, Diesel, and Welding careers. This strategic plan was put in place to help encourage females to explore more non-traditional coursework during their high school studies.

In addition, female judges and assistants are utilized whenever possible during contest facilitation during the SkillsUSA State Leadership and Skills Conference. The secondary Welding contest chairperson, a female, is also the Welding instructor and department head at MSU-Northern. She makes a special effort to present insight to both male and female students on how to successfully pursue a career in fabrication, welding, and metallurgy.

SkillsUSA leaders and chapter advisors use video segments from the State Leadership and Skills Conference to highlight skills being tested at the conference. These video clips are featured on the state's SkillsUSA website to illustrate female students competing in stereotypical male careers, such as Automotive Technology, Carpentry, Welding, and Power Equipment. Posters were used to raise awareness of non-traditional careers in Industrial, Trades, and Technology Education; and advisors displayed similar posters in their classrooms to encourage non-traditional participation. Many of the State Conference contestants were female competing in non-traditional events, of which numerous females were ranked in the top three contest positions.

Montana's first female, National SkillsUSA Officer, who served as a National Officer during the 2014-15 school year, provided an encouraging and good luck message to participants at the 2016 State SkillsUSA Conference, which included drawing attention to the opportunities available to all students to explore non-traditional employment areas. There has been increasing interest from females participating at the high school program level due to encouragement from male and female chapter advisors. State-wide emphasis on job shadowing in non-traditional careers is also becoming more common.

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?

Postsecondary Response

Gallatin College partnered with Vista Outdoors/Blackhawk and hosted Manufacturing Day. Manufacturing Day is held twice a year at local manufacturing facilities and brings hundreds of students on-site to see jobs in manufacturing and support, meet industry panelists, and college faculty. Highlighting Pathways and a variety of careers in manufacturing high school students, teachers, and counselors across the region had the opportunity to try hands-on activities in real-world workplace settings. 80-100 students annually, 10-18 teachers/counselors, 4-12 industry partners, ABE and at-risk youth attended the event as well.

Great Falls College initiated their Paired Pathways project for Adult learners. ABE students had the ability to participate in GFC trades programs at a discounted rate. If the students have their HiSet or other high school equivalency, they get six credits at half-price tuition. If they have not completed high school, they will receive half-price tuition and no fees, just as a dual enrollment student would. The only fees these students have to pay are program fees. Great Falls served eight Paired Pathways students.

The Perkins Coordinator at City College attended a Board meeting with staff from Riverstone Health Clinic of Yellowstone County, which provides services to low income students, especially single parents and displaced homemakers.

Missoula College continued a bridge program that partners with the Lifelong Learning Center, which serves Adult Basic Education learners in Missoula, to provide newly admitted CTE students instruction in math, writing, contextualized reading, study skills, time management, computers, Moodle, CyberBear, and e-mail with the goal that students will be college ready and more confident in their abilities. The Lifelong Learning Center faculty and staff are trained to provide pre-college assistance to special populations, single parents, and displaced homemakers. By partnering with the Lifelong Learning Center to bridge where the students are to what is expected in their CTE programs, Missoula College can improve their success in the high-skill, high-wage, and high-demand careers that lead to better salaries and self-sufficiency. The Lifelong Learning Center also collaborates with Disability Services, the Academic Advising Center, Career Services, and the TRIO EOD to support all students, including Perkins special populations.

Salish Kootenai College has numerous strategies to prepare special populations for high-skill, high-wage, and high-demand occupations including providing access to counseling services, assistance with financial aid applications and scholarships, career services, and success coaching. SKC students are asked to self-identify as a member of one or more of the listed special populations following admission to the college and as part of the course registration process. During orientation, students are provided with information about services that assist students to meet their educational goals and any special identified needs. For example, the SKC Child Care Center provides parenting classes for single parents. The counseling staff are available to provide short-term, problem-focused counseling, and the student success coaches provide short-term coaching and referral to additional campus or community services that may be needed. The SKC Disabilities Counselor is a full-time counselor whose duties include assessment, short-term counseling, and referrals for students who self-disclose disabilities. Additionally, the SKC Disabilities Counselor works with students with documented disabilities who need accommodations in classes or other components of their educational process. The Disabilities Counselor works with faculty and staff members to ensure that appropriate accommodations are put in place.

Helena College developed Adult Basic Education Programs of Study specific to the needs of adults for welding, nursing, automotive, machining, social work and fire and rescue. The templates created were shared at ABE conferences and events and are available on the Big Sky Pathways website.

Flathead Valley Community College worked with ABE staff and administration to explore the feasibility of new program of study in Health Occupations that will be appropriate for ABE/ESL students. Participants work closely with CNA program director to prepare for entry into CNA course and remediation occurs in ABE classes. ABE/ESL staff, in coordination with the new Learning Center Director and advisors are working toward a lunch hour digital literacy course in ABE classroom for ABE and other adult learners transitioning to technical courses at the college. These staff are also planning short term "bootcamp" for new students who are coming out of ABE or are referred by advisors.

Secondary Response:

The OPI's CTE division continues to collaborate with the Special Education division through the State Improvement Grant (SIG) to recruit and/or facilitate the entrance and retention of special populations and disadvantaged persons into existing career and technical education programs or other education and training; and provide the targeted populations with an access point into a seamless, linked system that promotes their successful attainment of educational and career goals.

The Health Science Education Specialist piloted behavioral health lessons/curricula at one of our reservation high schools to introduce careers in behavioral and mental health; one of the highest healthcare workforce needs in the state. This high school represents many special population categories as outlined by Perkins legislation. The course followed a traditional Health Science Exploration/Human Body Systems course. Students were both juniors and seniors. Initial evaluations indicated high student interest in multiple health professions including behavioral health.

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

State/Postsecondary Response:

Biweekly technical assistance calls were held for both the Perkins and BSP Coordinators.

OCHE hosted two, two-day technical trainings for the BSP Coordinators during the last academic year.

OCHE hosted one, two-day technical training for the Perkins Coordinators during the last academic year, as well as regional grant-writing workshops for Perkins grantees.

Secondary Response:

CTE State Program Specialists continue to provide ongoing and consistent technical assistance to Montana stakeholders, including local high school teachers, counselors, administration, Perkins grant managers, and other personnel associated with all aspects of CTE. Onsite technical assistance is provided upon request at Perkins-eligible schools. Technical assistance is also offered via e-mail, webinars, conference calls, and Adobe Connect communications due to Montana's vast geographical distances.

CTAE Division Administrator, TJ Eyer, and Health Science Education Specialist, Renee Harris, were leaders in the Billings School District CTE Review that was requested by the Superintendent of the Billings School District.

The review focused on several CTE areas including leadership, program development that aligned with regional workforce needs, access and equity of CTE programs, curriculum and instruction, professional development, scheduling, advisement, dual-credit and work-based learning.

CTE State Program Specialist, Renee Harris, participated in the E-Grants Management System team and provided free regional technical assistance during work sessions on the Perkins grant application.

Family & Consumer Sciences Education Internship with MSU and OPI—Montana State University and the Office of Public Instruction offered a Family & Consumer Sciences Internship as an alternate route to receive a FCS teaching license. This internship is designed to give current classroom teachers licensed in another subject area up to three years to work on their FCS endorsement while teaching FCS in a secondary school through Montana State University, the only post-secondary institution in Montana offering a FCS license program. Since Internship students are teaching and studying simultaneously, they require additional technical assistance from the FCS Education Specialist in terms of curriculum assistance/planning, finding classroom resources, searching for acceptable college courses approvable by MSU, informal mentoring and general help to help them finish successfully on time. In 2015-2016, eight teachers were enrolled the program.

Business Education Specialist Eric Swenson produces a weekly e-newsletter which is sent out to all secondary business educators and a number of school administrators and secondary counselors. Within the e-newsletter is information regarding Perkins-related information and resources including data collections, funding requirements, Big Sky Pathways, business education and career and technical education curriculum resources, and professional development information and resources.

Perkins Accountability Specialist, Christy Hendricks, provided clear and ongoing technical assistance throughout the year regarding general Perkins questions, Perkins grant application questions, as well as technical assistance for both the fall and spring CTE accountability data collections. Various electronic sources were used to provide this technical assistance such as: e-mail communication using the OPI Communication Server; FAQ's and written guides for data collection posted to the OPI website, phone calls and conference calls to individual school district personnel with questions about accountability data and Perkins requirements.

7. Serving individuals in state institutions

Part I: State Correctional Institutions

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

3497

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

28

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

The Pine Hills Youth Correctional Facility used Perkins funds to supplement the development of a construction shop for CTE programs to expand and provide more in-depth learning opportunities for students. The classes and certifications offered at Pine Hills were designed to teach skills that will allow them to leave the facility and find employment. Pine Hills is able to offer ServSafe and OSHA training, which both provide marketable skills to potential employers. Each student is able to currently leave Pine Hills with a portfolio of the work and certificates they have completed, and the facility will continue to improve this process as time allows.

Part II: State Institutions Serving Individuals with Disabilities

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

0

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

0

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

An RFP was issued for grants used to serve individuals with disabilities in state institutions offering CTE programs. No grant proposals were submitted.

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

No

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

Yes

Postsecondary Response:

Great Falls College sent a nutrition faculty to the Farm and Table International Symposium sponsored by Louisiana State University. The focus of farm to plate discussions is to address the role of consumers and their reliance on local foods. The conference explored how reliance on local foods impacts local economics, farm land protection, food security, and environmental stewardship. There are several chapters in the nutrition text that Great Falls College uses that deals with these issues and this conference provided current information. The information from this conference also helped the faculty provide information to students on limited budgets because reliance on local foods can decrease food costs for the consumers. After the faculty attended this conference, 100% of the students in her class earned a "B" grade or better on assignments based on Factors Affecting Food Cost and Factors Affecting Food Selection.

Flathead Valley Community College developed a Culinary Arts Certificate that requires students to successfully complete a capstone course that involves starting, operating, and managing a restaurant on campus.

Missoula College's Culinary Arts program created a Hospitality Certificate, which is the first one in the state. The program utilizes existing coursework and developed new courses. The initial enrollment was 10 students and 8 students completed.

Fort Peck Community College developed programs in Early Childhood Education.

University of Montana – Western supplemented training for Early Childhood Education Instructors to discuss the certificate and AAS programs, align learning objectives, address problems and make program improvements.

Secondary Response:

As mentioned above, the FCS Education Specialist offered a five day FCS Summer Conference with MSU & Montana FCCLA in July of 2015. For the seventh year in a row, the FCS Specialist offered specific professional development in support of local family and consumer sciences programs. In addition, each month the FCS Specialist sent informational updates to all family and consumer sciences programs via e-mail. The updates included a variety of pertinent information including curriculum ideas, lesson plans, classroom resources, and state and national professional development opportunities. The FCS Specialist attended and presented at professional development conferences and meetings around the state to provide direct technical assistance to Montana educators. She made many technical assistance visits throughout the year and hosted a social networking group for FCS educators as a means to share ideas and/or get help from each other.

In October 2015, FCS Education Specialist Megan Vincent presented both an OPI update and an FCS resources workshop to all FCS teachers in attendance at the Montana Association of Career & Technical Education Fall Institute which included important deadlines, updates and resources.

Family & Consumer Sciences Education Internship with MSU and OPI—Montana State University and the Office of Public Instruction offered a Family & Consumer Sciences Internship as an alternate route to receive a FCS teaching license. This internship is designed to give current classroom teachers licensed in another subject area up to three years to work on their FCS endorsement while teaching FCS in a secondary school through Montana State University, the only post-secondary institution in Montana offering a FCS license program. Since Internship students are teaching and studying simultaneously, they require additional technical assistance from the FCS Education Specialist in terms of curriculum assistance/planning, finding classroom resources, searching for acceptable college courses approvable by MSU, informal mentoring and general help to help them finish successfully on time. In 2015-2016, eight teachers were enrolled the program.

In November 2015, FCS Education Specialist Megan Vincent attended and spoke at the Montana State University FCS Education Teachers recruitment event. MSU and OPI are partnering to work on increasing the enrollment and production of FCS teachers for the state since there is a major shortage each year.

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

Postsecondary Response:

In the 2015-16 grant year ten campuses were awarded one-year grants of up to \$75,000 to pursue a wide variety of activities outlined in the RFP. These grants were awarded to Perkins eligible two-year programs or community colleges for Strengthening Big Sky Pathways projects. The objective of the Strengthening Big Sky Pathways grant is to grow and further develop the Strengthening Big Sky Pathways program in the State of Montana by providing students with a smooth transition from high school to college and careers. The grant focuses on the following elements:

1. The development and enhancement of Rigorous Programs of Study and Big Sky Pathways that include value added activities for students, including opportunities for dual enrollment, internships, work-based learning experiences, and industry recognized credentials.
2. Creating career cluster seminar events to connect students, parents, educators and industry in high-skill, high-wage and high-demand employment sectors.
3. Career counseling activities on campuses, in high schools, and at the Montana School Counselors Association annual meeting, and integration with Montana ACTE to support and develop secondary CTE teachers.
4. Developing Industry Partnership activities.

5. Creating or participating in professional development activates for secondary, postsecondary and/or industry partners.

6. Promoting Big Sky Pathway awareness.

The culmination of these efforts resulted in the development of 45 new pathways, within 9 clusters at 30 high schools.

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

State Response:

The Adult and Basic Education Director chaired the Moving Pathways Forward Project. The goal of this project was the integration of adult education into broader career pathways system development at the state and local levels by building up the success and lessons learned from previous years. Efforts resulting from this project included: defining career pathways in Montana, identifying interagency partners, and identification of education and training services available. There have been ongoing communications with all partners and stakeholders.

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

No

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Step 3: Use of Funds: Part C

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

Postsecondary Response:

Flathead Valley Community College expanded its Industrial Maintenance certificate program to a 2-year AAS degree, including stackable credentials, based upon industry feedback and needs. The industrial maintenance field has experienced, and is projected to grow at, above average rates during the next 10 years. FVCC used Perkins funds to acquire a hydraulic trainer package with 2 stations, made by Iron Horse Industrial Training Equipment, for students to experience industrial-grade components and have an in-depth look at how hydraulics work.

Flathead Valley Community College offers the only Montana high school welding instructor training in the state. In order for MT high schools to offer popular concurrent enrollment classes in welding, the instructors must be trained by AWS certified instructors. FVCC offered this training at no cost to teachers, which allowed teachers from Montana's rural schools able to afford to attend. This training increased the number of high schools able to offer concurrent enrollment (four new schools) as well as the level of education of teachers delivering welding courses in the state.

MSU-Northern's plumbing program purchased a new hydraulic heating system, through which 2nd year students are being certified.

Great Falls College purchased a Puritan Bennett 980 Ventilator for their nursing laboratory. Seven out of nine students were rated Exceptional and two were rated Above Average in knowledge by preceptors evaluating student preparation and ability to transfer lab skills to actual patient care skills. Eight out of nine students were rated Exceptional and one was rated Above Average in psychomotor skills using the equipment. All nine 2016 graduates passed the Therapist Multiple Choice Exams and seven of eight passed the clinical simulation exam.

The American Physical Therapy Association provided a 2-day credentialing course for 34 clinical instructors at Great Falls College. The instructors were educated on appropriate goal setting, learning objectives, outcomes, and communication between students, clinical instructors, and faculty members from the institution for the best learning environment for the students.

Highlands College became a Microsoft Office IT Academy and Testing Center. The IT Academy provided curriculum and training to prepare students to take Microsoft Office Certification or Microsoft Office Excel Exams. The college purchased 50 Microsoft Office Specialist Study Guides for students to utilize in class and the library and will be used for multiple semesters.

Salish Kootenai College implemented an Emergency Services Certificate of Completion (CC). The Emergency Services CC is designed as a three-quarter sequence of courses embedded multiple stacked certificates that prepare students for entry level positions as an Emergency Medical Technician, Emergency Manager, Emergency Operations, or Wildland Firefighter. The curriculum includes general education requirements and core coursework meeting SKC's requirements for a Certificate of Completion. Students will earn multiple credentials, including ability to take the national registry examination for Emergency Medical Technician, FEMA certifications, and a "Red Card" for wildland firefighting.

One Design Drafting instructor at Gallatin College, that has received updated training and teaches AutoCAD, offered up to 20 hours of CAD instruction for up to 5 other Interior Design faculty. Students benefitted from faculty that have up-to-date knowledge on the programs that Gallatin College requires our students to use.

The Gallatin College Photonics Program Director started a new AAS Photonics Technician program. This is a program that was requested by the Montana Photonics Industry Alliance (MPIA) an industry driven organization, who also assisted in the design of the program and curriculum to ensure alignment with industry needs. Demand for skilled workers in the Bozeman area is high, and employment outlook is robust. There are over 38 Photonics companies in Gallatin County and they have a growing need to photonics technicians to continue to grow and develop their companies. A survey produced by MPIA indicated strong and growing regional demand of 27 up to 67 technicians needed each year locally over the next five years. Prior to this program there was no photonics education program in Montana.

City College added auto, EMT, business, and extended technical math dual enrollment courses in the Billings Career Center. The EMT course offers students the potential for certification at the completion of the course in addition to the college credit earned through dual enrollment.

Flathead Valley Community College has developed high-impact secondary to postsecondary collaborative programs to facilitate welding and health science dual enrollment course growth within their region. They worked with Columbia Falls to offer students a certificate of Health Occupations via dual credit in the high school. Students can also work on a CNA as part of an afterschool partnership with the local veteran's home for clinical work. FVCC offers AWS welding certifications via Big Sky Pathways for students at seven high schools in the state (Columbia Falls HS, Flathead HS, Whitefish HS, Lincoln County HS, Lincoln County Charter School of Innovation, Cut Bank HS & Powell County HS). FVCC also offers students a "Summer Experience" Program that brings students to campus to take college courses in career exploration (Med terms or Java I) plus a supporting academic core course in writing, communications or math. This program includes Pathways Career Exploration MCIS as well as service learning to really build the foundations of whole student success.

Several campuses increased their coordination between Big Sky Pathway staff and workforce staff in RevUp and HealthCare MT programs. These partnerships have increased opportunities to educate teachers, counselors, students, parents, and community members about Industry Recognized Credentials, stackable credentials, apprenticeships, pre-apprenticeships, and other work-based learning opportunities available for incorporation into Pathways. One campus started work on a co-op/intern experience and pre-apprenticeship exploration with Pathway high schools. Seeding the pool for co-op candidates (their program served 150 students this year via RevUp).

Secondary Response:

During the 2015 Montana ACTE Institute, there were several sessions featuring the Common Core and CTE detailing the work done by secondary schools and teachers who have been part of the Montana's Rigorous Programs of Study (RPOS).

Business Education Specialist Eric Swenson, along with Shields Valley High School business teacher Mitzi Richards, conducted three (3) regional professional development workshops in August 2015 for Montana' secondary and post-secondary business education professionals. The workshops provided Montana business educators to gain hands-on training to utilize the 22 instructional strategies for integrating literacy instruction within the business education curriculum. The Literacy-in-CTE sessions utilized materials development by the National Research Center for Career and Technical Education. The workshops were held at Skyview High School in Billings (August 5), Bozeman High School (August 6), and Glacier High School in Kalispell (August 8).

As mentioned above, the FCS Education Specialist offered a five day FCS Summer Conference with MSU & Montana FCCLA in July of 2015. This conference included an entire day focusing on Literacy in CTE as well as weaving the strategies throughout the week. Another day of the conference focused on STEM in FCS in both middle school and high school settings, and it included a presentation on Math in FCS curriculum.

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.

State Response:

An analysis of postsecondary Perkins funds expenditures for pathways development across the state found that the most common activities included:

1. Cluster Seminars to connect industry, secondary, and postsecondary.
2. Dual Enrollment in Pathways.
3. Outreach in the high schools (classroom presentations, serving on advisory boards, registration night presentations, parent/teacher nights, information sessions on Big Sky Pathways).
4. Development of events for students and parents through participation with industry.
5. State and national conference attendance and participation.

Dual enrollment continues to grow across the state of Montana. For 2015-16 the program had a total of 4304 enrollments. Dual enrolled students completed more than 19,000 credits either at our college campuses, online, or at their high school. The geographic reach extends across the state, with students from 107 public and private high schools participating. About 67% of the credits earned by dual enrollment students this year were delivered at a high school by college faculty or a qualified high school instructor. Of the more than 350 sections of dual enrollment taught on site at Montana high schools, 30% were in Career Technical Education (CTE) areas. This is an increase of 5% over the past reporting period. CTE dual enrollment is expanding in the state, and several colleges added new options with partner high schools in welding, health sciences, construction, and computing. These courses offer students the opportunity to start on a degree or certificate in high school, explore career options, experience college rigor, and explore connections with high demand careers available through the state's two-year college system. Montana State University Billings worked in 15-16 toward a City College pilot that began providing high school based dual credit for free that began Fall 2016.

Postsecondary Response:

Using Perkins funds, MUS put out an RFP for Strengthening Big Sky Pathways. The objective of this grant is to grow and further develop the Big Sky Pathways Program in the State of Montana by providing students with a smooth transition from high school or Adult Basic Education to college and careers. The grant focuses on the following elements: the development and enhancement of Rigorous Programs of Study and Big Sky Pathways that include value added activities for students, including opportunities for dual enrollment, internships, work-based learning experiences, and industry recognized credentials; creating career cluster seminar events to connect students, parents, educators and industry; career counseling activities and integration with Montana ACTE; developing Industry Partnership activities; creating or participating in professional development activities for secondary, postsecondary and/or industry partners and promoting big Sky Pathway awareness. Ten colleges received grants of up to \$75,000.

Most colleges receiving Perkins funds participated in the annual MT ACTE Institute. Montana ACTE strives to provide leadership in developing an educated, prepared, adaptable, innovative and competitive workforce. They are the voice for Career and Technical Education in Montana. The Institute provides an excellent platform to promote the development of career pathways with secondary partners.

Once again MSU-Northern hosted TekNoXpo. This event brought together high school students, teachers and counselors with Northern faculty, staff, students and business and industry partners to give a hands-on experience in agriculture technology, agriculture mechanics, automotive, diesel, plumbing, electrical, welding, drafting, civil engineering and nursing programs at Northern.

Missoula College hosted 30-40 students and parents from two different high schools interested in health care at the Health Wise Expo. College students and faculty explained different postsecondary degree programs in health care to the attendees. There were demonstrations of the SimMan and computerized patient simulator and students were able to participate in some of the different program labs, such as practicing stitches in Surgical Tech. They were able to see the different equipment used by each program. The Health Wise Expo also included the Business Departments and Applied Computing and Engineering Departments.

Secondary Response:

The entire body of work during this reporting cycle has been focused on supporting partnerships with all relevant stakeholders. The partnership with the Office of the Commissioner of Higher Education through the granting of Perkins Reserve funds for Strengthening Montana's Big Sky Pathways is specifically designed to support the partnership with secondary and postsecondary schools. These grants also direct schools to partner with employers, labor organizations to build pathways to match local and regional economic needs.

This partnership also has begun work the State Adult Education community to create pathways that are not just limited to traditional college track pathways, but will be utilized by all citizens of Montana throughout their employment career.

All this work is designed to provide support for students of all ages to achieve at least proficiency in all State Academic and Career and Technical Standards and reach their individual occupational and career goals.

On December 10, 2015, Business Education Specialist Eric Swenson presented a professional development session for the business education teacher preparation program at the University of Montana in Missoula. The session included information pertaining to national and state business education and career and technical education curriculum standards and guidelines, Perkins and state career and technical education funding and related requirements, Montana's Big Sky Pathways initiative, and ideas and resources for starting and advising a career and technical student organization.

In addition, Business Education Specialist Eric Swenson also provided training and instructional support to the students of the business education teacher preparation program at the University of Montana-Western in Dillon throughout the fall 2015 semester. Some the topics covered included principles and philosophies of career and technical education, business education curriculum development and resources, developing Big Sky Pathways, using the web-based career guidance system Montana Career Information System (MCIS), advising a Business Professionals of America or DECA chapter, and the importance of membership and active participation in professional organizations.

During FY2016, professional development and technical assistance was provided by Business Education Specialist Eric Swenson to secondary and post-secondary business educators, school administrators, and school counselors regarding the newly developed Montana Business Education Curriculum Resources binder. The compiled resources include the updated Framework for Business Education in Montana, the Montana K-12 [SCED] Course Codes and Descriptions, the National Standards for Business Education, the Common Career Technical Core from Advance CTE, and the updated Business and Marketing Education Program Guidelines. The Framework for Business Education in Montana is aligned to the National Standards for Business Education and the Common Career Technical Core and includes curriculum information from district, county, and curriculum cooperatives around the state. The Framework for Business Education in Montana includes an alignment and crosswalk to the National Standards for Business Education. The Framework also includes crosswalks to the competitive event programs for Business Professionals of America and DECA--which further enhances and demonstrates the intracurricular relationship of business and marketing education programs to Career & Technical Student Organizations.

In September 2015, Family & Consumer Sciences (FCS) Education Specialist Megan Vincent presented a professional development session for the Family & Consumer Sciences teacher preparation program students at Montana State University. The session included information pertaining to school funding, meeting local, state and national standards, national level FCS work, program promotion, advocacy and FCS connections to STEM. In April 2016, a second presentation was given to the Family & Consumer Sciences teacher preparation program students at Montana State University. This session included additional coverage of Carl Perkins and State CTE funding, job hunting and networking in the FCS field, CTE/FCS support, school staffing, program curriculum/schedules, CTE Advisory Councils, and general resources.

The Health Science Specialist is an active member of both the Office of Rural Health/Area Health Education Center Advisory Board (MORH/AHEC) as well as the Montana Healthcare Workforce Advisory Committee (MHWAC). The MORH.AHEC Board meets four times a year and the MHWAC meets monthly. These boards/committees are comprised of over 100 healthcare agencies including public health, mental health, physicians, dentists, nursing, hospitals organizations and the Dept. of Labor and Industry. This committee reviews future healthcare trends and needs and works to enhance the healthcare pipeline from secondary programs to health professions employment.

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

Yes

State Response:

The Montana Post-Secondary Educational Opportunities Council (MPSEOC) is a non-profit organization representing the 25 institutions of higher education across the state of Montana. The mission of the organization is the promotion of higher education to students, parents and guidance counselors, with the awareness of the post-secondary opportunities available throughout the state of Montana and beyond. State Leadership funds were used to partially fund the publication of MONTANA-GUIDE BOOK TO HIGHER EDUCATION and staff. This free online, interactive Guide Book to Montana High Schools provided in conjunction with the annual MPSEOC Montana Fall College Fair Tour, the Montana Guide to Higher Education is a tool used by high school counselors, parents, and students in the college selection process. OCHE staff also collaborated with MCIS to increase alignment in their college and career guidance platform to feature more Pathways language, better and more clear links with existing resources, and more streamlined information.

Postsecondary Response:

Once again MSU-Northern hosted TekNoXpo. This event brought together high school students, teachers and counselors with Northern faculty, staff, students and business and industry partners to give a hands-on experience in agriculture technology, agriculture mechanics, automotive, diesel, plumbing, electrical, welding, drafting, civil engineering and nursing programs at Northern.

Helena College hosted a Health Sciences Career Cluster Seminar. These events expose teachers and counselors to multiple pathways in different college program areas. A recent health science event, for example, gave insight into Montana's highly competitive nursing programs and the allied health fields. In attendance were representatives from facilities that employ nursing, medical assisting, medical coding, and mental health direct care graduates. The seminar format included high school teachers, counselors, and college instructors, as well as business/industry partners and program graduates. After a shared information session, the seminar broke into pathways and HealthCARE Montana groups. Pathways documents were completed following the seminar.

Great Falls College had more than 150 students and their teachers/counselors attend their Trades Rodeo, where they were able to explore the trades programs offered by two colleges in addition to union apprenticeships and the military. High school instructors and counselors learned more about the programs that are offered and got to visit the Big Sky Pathways coordinator about dual credit and pathways opportunities for their students. Basic welding, bending pipe, CPR practice were some of the popular activities.

Missoula College hosted the Norco/Miller Expo in March 2016, with over 100 students in attendance. Students from Darby Job Corp were in attendance as well as High Schools from Missoula County, Mineral County, Ravalli County, and Sanders County. Counselors toured our facilities and learned about the programs. There were also some parents in attendance asking questions and getting involved as well. This event really helped revitalize interest in industrial pathways, especially manufacturing. Almost all of Missoula College Faculty members from the Industrial Technology Department participated in showing the students around, assisting in demonstrations, or doing demonstrations. There was participation from the Carpentry Program, Diesel Program, Heavy Equipment Operations Program, Recreational Power Equipment Program, Machining Program, and the Welding Program.

Many Perkins funded positions throughout the state work closely with Graduation Matters Montana. Graduation Matters Montana, a multi-pronged, statewide effort to ensure Montana's public schools are meeting the goal of graduating more students ready for college. This affords us the opportunity to work alongside high school staff and explain how CTE courses and programs can positively influence graduation.

Secondary Response:

A partnership with the Montana Career Information System began in 2008, and continues as a method for counselors, teachers, and students to explore information about careers and career pathways. In Montana, MCIS is provided as a free service to high schools, and many of these use elements of the MCIS to provide career guidance and academic counseling. During this CAR reporting timeframe, a total of 40,741 portfolios were created using MCIS in 191 high schools, with a total of 87,185 logins.

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

State Response:

Every grant applicant indicated dual enrollment as a value-added activity in their FY16 report and FY17 planned activities. CTE dual enrollment, when partnered with Big Sky Pathways, has huge potential for students, parents, secondary, and postsecondary. It has the potential to address the emerging skills gap in the Montana workforce by increasing student knowledge of one- and two-year programs in the state and the well-paying careers associated with these programs. This is particularly potent when coupled with other activities that shift the perception of two-year education, like MSCA CTE day and counselor tour. Coordinating with OPI and the adult outreach efforts of HealthCare MT and RevUp has created additional support to coordinators who feel they are outside of their area of expertise or need better information linked to industry. A statewide emphasis on Dual Enrollment opportunities resulted in a 5% growth rate in CTE courses from the last reporting period, which now puts the program distribution on average with national trends (70% General Education and 30% CTE). The system is targeting a balance of closer to 50/50 in types of dual enrollment offerings for students to be more reflective of the labor market demands in Montana. This work is ongoing through Big Sky Pathways.

Postsecondary Response:

Ten colleges received Big Sky Pathways grants of up to \$75,000. The purpose of this grant is to grow and further develop the Big Sky Pathways Program in the State of Montana by providing students with a smooth transition from high school or Adult Basic Education to college and careers. The grant focuses on the following elements: the development and enhancement of Rigorous Programs of Study and Big Sky Pathways that include value added activities for students, including opportunities for dual enrollment, internships, work-based learning experiences, and industry recognized credentials; creating career cluster seminar events to connect students, parents, educators and industry; career counseling activities and integration with Montana ACTE; developing Industry Partnership activities; creating or participating in professional development activities for secondary, postsecondary and/or industry partners and promoting big Sky Pathway awareness.

MUS colleges established 45 new pathways with Montana high schools in 15-16. These pathways are reflective of areas that are high-skill, high-wage, and high-demand labor sectors either in the state or in a particular region.

City College added auto, EMT, business, and extended technical math dual enrollment courses. The EMT course offers students the potential for certification at the completion of the course.

Flathead Valley Community College has developed high-impact secondary to postsecondary collaborative programs to facilitate welding and health science dual enrollment course growth within their region. They worked with Columbia Falls to offer students a certificate of Health Occupations via dual credit in the high school. Students can also work on a CNA as part of an afterschool partnership with the local veteran's home for clinical work. FVCC offers AWS welding certifications via Big Sky Pathways for students at seven high schools in the state (Columbia Falls HS, Flathead HS, Whitefish HS, Lincoln County HS, Lincoln County Charter School of Innovation, Cut Bank HS & Powell County HS). FVCC also offers students a "Summer Experience" Program that brings students to campus to take college courses in career exploration (Med terms or Java I) plus a supporting academic core course in writing, communications or math. This program includes Pathways Career Exploration MCIS as well as service learning to really build the foundations of whole student success.

Missoula College has expanded dual enrollment health sciences offerings in their region and Gallatin College has added interior design to Great Falls and Billings.

University of Montana – Western formalized an MOU with Great Falls Public Schools in an effort to increase the number of dual enrollment courses available. Staff also worked with Great Falls Public School teachers to articulate the family consumer science program with UM Western’s new Early Childhood Education program.

All colleges have advisory committees that provide feedback on curriculum, courses, and equipment. Industry professionals interact with students by helping with interviewing, presentations, and site tours. Several colleges host a professional connections dinner which allows students to sit for several hours with industry leaders and discuss industry trends and share program content.

Secondary Response:

Through Big Sky Pathways and working together with the Office of Commissioner of Higher Education (OCHE) coordinators and Big Sky Pathways Coordinators, Dual Credit has been an emphasis as an important component in every pathway. OPI Content Area Specialists continue to support LEAs and the development of CTE Dual Credit courses.

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?

No

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

Yes

Secondary Response:

The OPI continues their strong commitment to support CTE student organizations in Montana. The majority of our CTE State Program Specialists also serve as state advisors in their respective career fields, so they provide direct state leadership to their program-related career and technical student organization (CTSO). Secondly, we continue to support them in resources and with funding—our office staff provides administrative and leadership resources to assist the Specialists’ state competitive event conferences. State Leadership (state officer) teams from Business Professionals of America (BPA), Family, Career and Community Leaders of America (FCCLA), HOSA, DECA, SkillsUSA, and Technology Student Association (TSA) participated in team building activities, leadership styles, and situational leadership activities. The CTOS supported in Montana are: FFA, Business Professionals of America, DECA, Family, Career and Community Leaders of America, HOSA, SkillsUSA, and Technology Student Association (TSA).

The FFA State Director provides leadership, programming support, and technical assistance. Additionally, his responsibilities include state convention planning, district leadership school planning and board of director meeting planning which occurs four times per year. Daily support is offered to the State’s Agricultural Education Instructors via a list-serve program. Jim Rose attends State FFA Foundation Board meetings, State FFA Alumni meetings, Montana Association of Agriculture Educators (MAAE) meetings, the MAAE’s summer update conference, the National Association of Supervisors of Agricultural Education (NASAE) meetings, and the National Association of Agriculture Educators (NAAE) meetings.

Business Education Specialist Eric Swenson serves as a member of the Business Professionals of America, Montana Association State Board of Directors and Montana DECA Board of Directors. In this ex-officio role, he provides curriculum, leadership, programming support, and technical assistance to the two CTSOs. In addition, he attends the meetings of the two CTSO Boards with the Montana BPA Board meeting held in August 2015 the Montana DECA Board meeting taking place in September 2015. Additionally, the Business Education Specialist served as a competitive events judge at the Montana BPA Region 3 Leadership Conference (January 18, 2016), Region 4 Leadership Conference (December 16, 2015), and Region 5 Leadership Conference (January 12, 2016) as well as the Montana DECA State Career Development Conference (February 7-9, 2016) and the Montana BPA State Leadership Conference (March 13-15, 2016). Furthermore, Business Education Specialist Eric Swenson served as a competitive events judge at the Montana FCCLA State Leadership Conference (March 20-22, 2016). Lastly, Business Education Specialist Eric Swenson assisted with the facilitation of Montana BPA's first Fall Leadership Conference (October 11-12, 2015) for chapter members and advisors. During the Fall Leadership Conference, Business Education Specialist Eric Swenson also presented a professional development workshop for Montana BPA local chapter advisors in attendance in which they received resources and information from the new Montana Business Education Curriculum Resources. Resources included the Framework for Business Education in Montana, the Montana K-12 Course Codes and Descriptions, the National Standards for Business Education, the Common Career Technical Core, and the updated Business and Marketing Education Program Guidelines.

The Health Science Education Specialist is an advisor for HOSA-Future Health Professionals. The HOSA State Director and advisor planned and presented five regional Fall Leadership Conferences for 155 students in Helena, Butte, Missoula, Kalispell and Bozeman. All conferences took place between Oct. 1 and Dec. 1, 2015. Students had the opportunity to learn CPR, phlebotomy, blood pressure and intubation skills from paramedics and RNs who volunteered their time to work with the students. We also had a Licensed Counselor from each community who spoke with students about careers in behavioral health.

The Industrial Trades and Technology Education Specialist, Don Michalsky, serves as the SkillsUSA State Advisor and participates as an Advisory Board member for both SkillsUSA and Montana TSA. His responsibilities include state conference planning as well as technical assistance. Mr. Michalsky attends Montana SkillsUSA and TSA Advisory Board meetings. In addition, Mr. Michalsky provides weekly support to the State Directors for both organizations, and participates in regular CTSO meetings with Cassie Huntley, Montana State Director for SkillsUSA, and also assists Dwight Freeman and Craig Todd, State Directors for TSA. Mr. Michalsky was also instrumental in offering professional development opportunities for advisors of each organization at the state conference, national conference, summer up-date training, and the presentation of a CTSO workshop during the Montana ACTE Institute, October, 2015.

In addition, the SkillsUSA State Director chaperoned selected SkillsUSA State Officers to Washington, DC, where they participated in leadership and advocacy training, as well as making congressional visits, September, 2015.

TSA hosted their annual Summer Up-Date Conference in Bozeman, on June 13-17, 2016.

State Officers from both SkillsUSA and TSA attended the combined CTSO Leadership Training in Bozeman on June 3-5, 2016.

Family & Consumer Sciences Education Specialist Megan Vincent served as the Montana FCCLA State Advisor. In this ex-officio role, she provided curriculum, leadership, programming support, and technical assistance to FCCLA. In addition, she attended the all Board of Directors meetings (August, October, February, June) and all State Executive Council meetings (July, August, February, March, June). In October 2015, she provided leadership, coordination and presented at the second annual Montana FCCLA Leadership Rally. Megan Vincent represented Montana FCCLA at the national State Advisers Management Meeting in January 2016.

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

State Response:

The State CTE Advisory Board is made up of OCHE and OPI employees and individuals recognized as top leaders in one of the 16 career clusters. The purpose of this Board was to provide advice and ideas to the State Executive Leadership Team (SELT) regarding BSP, review CTE curriculum and provide guidance on industry-recognized credentials. The Board members received training from CORD officials in understanding the role of the Board as it pertains to the review of CTE programs and using data to guide decision making. SELT partners collaborate to create the tools and environments to facilitate seamless transition for students to embrace lifelong learning, achieve their full potential and be positive contributors to their community and society. This Board will soon undergo reconstruction to better prepare the state of Montana for Perkins Reauthorization.

Postsecondary Response:

Several campuses increased their coordination between Big Sky Pathway staff and workforce staff in RevUp and HealthCare MT programs. These partnerships have increased opportunities to educate teachers, counselors, students, parents, and community members about Industry Recognized Credentials, stackable credentials, apprenticeships, pre-apprenticeships, and other work-based learning opportunities available for incorporation into Pathways. One campus started work on a co-op/intern experience and pre-apprenticeship exploration with Pathway high schools. Seeding the pool for co-op candidates (their program served 150 students this year via RevUp).

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:

The OPI Business Education Specialist works in partnership with business and industry as an active Board member of the Montana Council on Economic Education. This Board is comprised of secondary school administrators, postsecondary faculty, representatives from the banking, insurance, and service industries as well as from the state and federal government.

The Health Science Education Specialist is an active board member of the following organizations/committees that support partnerships between education and business & industry:

The Montana Healthcare Workforce Advisory Council—meets once a month and consists of approximately 110 healthcare organizations, colleges, and healthcare workers.

Montana Area Health Education Center Advisory Board—meets quarterly and brings together five regional offices as well as the state office to review the healthcare pipeline activities, graduate medical education and professional development. Meetings generally highlight multiple research projects regarding workforce/healthcare needs in rural communities in Montana.

National Consortium for Health Science Education—a national organization that brings together representatives from almost all states to discuss and improve health science education. We also meet with a Publishers Coalition on curriculum design in health professions areas.

The FCS Education Specialist, Megan Vincent, worked in partnership with business and industry as an active Board Member of the Montana Financial Education Coalition and as an active steering committee member of the Montana Partnership to End Childhood Hunger. Megan Vincent also served as the President for the National Association of State Administrators of Family & Consumer Sciences (NASAFACS) from July 2015 until June 2016. In this capacity, she worked with business and industry on a national level to support FCS programs across the United States. Megan Vincent was a member of the Bozeman High School FCS Advisory Committee where she served alongside local business and industry professionals; in this capacity she also served as an evaluator for Culinary Arts finals at Bozeman High School. Megan Vincent was also a member of the Bozeman School District Superintendent's Commission on School Food Service and Nutrition Education where she served alongside local business and industry professionals and school district staff. Megan Vincent serves as an advisor to Montana ProStart. Megan Vincent is a member of the statewide Montana Farm to School Leadership Team that meets quarterly.

Ongoing partnerships between education and business occur in all CTE program areas through various career and technical student organization (CTSO) leadership and career development activities throughout the year.

Again, during the FY 2016 reporting year, Business Education Specialist Eric Swenson served as a member of the Board of Trustees at the national level for Business Professionals of America as the State Supervisor Representative. Additionally, Eric was elected to serve as the Board's secretary. As a member of the Board, his responsibilities include ensuring that member needs are met, evaluating and approving programs and activities, establishing board operating policies, planning future direction of Business Professionals of America, and electing officers and an Executive Committee. Board of Trustees members are advocates for and representatives of the organization within the various communities being served. In addition, they have a fiduciary responsibility for the organization. During the year two meetings of the Board of Trustees were held in Boston, Massachusetts,[ES1] along with conference calls during the school year.

Partnerships are developed and enhanced as representatives from various Montana businesses and industries, along with postsecondary staff and faculty, volunteer to judge and facilitate competitive events. In addition, they also provide valuable presentations at state conferences for student members.

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

Postsecondary Response:

Flathead Valley Community College developed a Culinary Arts Certificate that requires students to successfully complete a capstone course that involves starting, operating, and managing a restaurant on campus.

Missoula College's Culinary Arts program created a Hospitality Certificate, which is the first one in the state. The program utilizes existing coursework and developed new courses. The initial enrollment was 10 students and 8 students completed.

Flathead Valley Community College expanded its Industrial Maintenance certificate program to a 2-year AAS degree, including stackable credentials, based upon industry feedback and needs. The industrial maintenance field has experienced, and is projected to grow at, above average rates during the next 10 years. FVCC used Perkins funds to acquire a hydraulic trainer package with 2 stations, made by Iron Horse Industrial Training Equipment, for students to experience industrial-grade components and have an in-depth look at how hydraulics work.

Salish Kootenai College implemented an Emergency Services Certificate of Completion (CC). The Emergency Services CC is designed as a three-quarter sequence of courses embedded multiple stacked certificates that prepare students for entry level positions as an Emergency Medical Technician, Emergency Manager, Emergency Operations, or Wildland Firefighter. The curriculum includes general education requirements and core coursework meeting SKC's requirements for a Certificate of Completion. Students will earn multiple credentials, including ability to take the national registry examination for Emergency Medical Technician, FEMA certifications, and a "Red Card" for wildland firefighting.

The Gallatin College Photonics Program Director started a new AAS Photonics Technician program. This is a program that was requested by the Montana Photonics Industry Alliance (MPIA) an industry driven organization, who also assisted in the design of the program and curriculum to ensure alignment with industry needs. Demand for skilled workers in the Bozeman area is high, and employment outlook is robust. There are over 38 Photonics companies in Gallatin County and they have a growing need to photonics technicians to continue to grow and develop their companies. A survey produced by MPIA indicated strong and growing regional demand of 27 up to 67 technicians needed each year locally over the next five years. Prior to this program there was no photonics education program in Montana.

Secondary Response:

As previously reported, Business Education Specialist Eric Swenson conducted three (3) one-day regional professional development workshops in August 2015 for Montana's secondary business educators. These workshops included strategies for Literacy-in-CTE for implementation into the business education curriculum as well as instruction in apps and online resources for use in business education and resource for teaching coding and computer science principles. The workshops were held in Billings (August 5, 2015), Bozeman (August 6), and Kalispell (August 8).

Updates to the crosswalks for the competitive event programs for Business Professionals of America and DECA were updated within the Framework for Business Education in Montana for changes and updates made to the competitive event programs for FY2016. The updates to the BPA and DECA crosswalks ensure the intracurricular relationship of business and marketing education programs to Career & Technical Student Organizations is enhanced and demonstrated.

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

Yes

Postsecondary Secondary:

Flathead Valley Community College developed a Culinary Arts Certificate that requires students to successfully complete a capstone course that involves starting, operating, and managing a restaurant on campus.

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

Postsecondary Secondary:

Flathead Valley Community College hosted a teacher's camp, Week 1 running June 13-17 and Week 2 running June 20-24. 105 area public school teachers earned more than 100 credits by participating in Teacher Camp. The evaluations completed by these teachers indicate an extremely high satisfaction rate (average of 4.8 out of 5). Also, the teachers reported that what they had learned would be impactful in their classrooms (average 4.7 out of 5). Some of the topics covered were: Supporting Students with Extreme Behaviors, Technology for Teachers: Integrating Technology into Every Lesson, and The Workshop Model.

Miles Community College offered a Summer Teacher's Institute that provided continuing education, networking opportunities, and opportunity to earn either OPI units or one college credit. Some of the workshops included: Integrating Technology for the classroom, Teaching Elements of Design, and Differentiated Instruction.

Miles Community College also hosted an Educator's Conference October 15-16, 2016. Some of the workshop topics offered were: Research and Present, Working with Photoshop, Grant Writing Basics, Classroom Websites, and 9 Essential Skills for the Classroom.

Secondary Response:

Family & Consumer Sciences Education Internship with MSU and OPI—Montana State University and the Office of Public Instruction offered a Family & Consumer Sciences Internship as an alternate route to receive a FCS teaching license. This internship is designed to give current classroom teachers licensed in another subject area up to three years to work on their FCS endorsement while teaching FCS in a secondary school through Montana State University, the only post-secondary institution in Montana offering a FCS license program. Since Internship students are teaching and studying simultaneously, they require additional technical assistance from the FCS Education Specialist in terms of curriculum assistance/planning, finding classroom resources, searching for acceptable college courses approvable by MSU, informal mentoring and general help to help them finish successfully on time. In 2015-2016, eight teachers were enrolled the program.

Health Science Teacher Training was mentioned earlier in this report, but it is important to reiterate the relevance of the training. Montana has had limited success in recruiting health professionals to teach in high schools for a number of reasons, but healthcare workforce shortages and limited school budgets are the top two concerns. In order to expand Health Science programs in our high schools, a two-week course was designed for secondary Science Teachers to provide them with the healthcare industry background necessary to effectively teach health science courses. Part of this training required the teachers to job shadow in a medical facility to experience the healthcare environment. This training was highlighted in an article published in a CORD monthly newsletter.

Agricultural Education—a mentoring program continues to be made available for agriculture teachers with less than five (5) years of experience. Participation in the mentoring program is optional. Mentee teachers are allowed to select their mentor teacher. All parties are highly encouraged to have frequent communication, keep logs of activities, and visit the other school at least once.

Business Education Specialist Eric Swenson presented a professional development session for the business education teacher preparation program at the University of Montana in Missoula, which includes individuals transitioning to teaching from business and industry. The session included information pertaining to national and state business education and career and technical education curriculum standards and guidelines, Perkins and state career and technical education funding and related requirements, Montana's Big Sky Pathways initiative, and ideas and resources for starting and advising a career and technical student organization.

In addition, Business Education Specialist Eric Swenson also provided training and instructional support to the students of the business education teacher preparation program, which includes enrollees completing the transition from business and industry to teaching, at the University of Montana-Western in Dillon throughout the fall 2015 semester. Some the topics covered included principles and philosophies of career and technical education, business education curriculum development and resources, developing Big Sky Pathways, using the web-based career guidance system Montana Career Information System (MCIS), advising a Business Professionals of America or DECA chapter, and the importance of membership and active participation in professional organizations.

As mentioned in the above professional development section, the 'New CTE Professionals Workshop' held on October 14, 2015 was free to all CTE teachers who were new or had less than four years of teaching experience in the classroom. The intentional focus on new teachers was meant to help assist and improve the retention of these new teachers.

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

No