

Consolidated Annual Report, Program Year 2016 - 2017

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

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 2016, 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 Director of Workforce Initiatives and Information has been maintained and has the responsibility of collecting and analysis of Perkins and workforce related academic data, at both the state and local levels. The responsibilities of this position allow for the data collection and analysis to remain a priority for OCHE. The Compliance and Workforce Data Analyst spends 50% of their time working strictly Perkins performing workforce data collection, analysis, reporting, and industry engagement. This position is also responsible for reporting the postsecondary performance indicators on the Consolidated Annual Report. A workforce analysis report was created jointly with the Montana Department of Labor and Industry. This report measures the supply college graduates by program and the occupational demand in Montana. Perkins receiving campuses are utilizing this report when making strategic decisions regarding what programs to prioritize.

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 2016 - 2017

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 on average. 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 2016-2017, Miles Community College received a monitoring visit. There were no major findings.

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:

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 give 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 the institutions that make up the Montana University System are required by Board Policy 303.3 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 E-Grant online grant management platform continued 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.

The Office of the Commissioner of Higher Education moved the state's "Your Guide," which is a summary of all Montana's two-year college workforce development certificate and degree programs, from a printed guidebook to an online resource available through the Montana University System's website. OCHE also was able to use WebEx throughout the grant cycle to connect campuses and share best practices as well as provide professional development. Recognizing the value of dual enrollment in early engagement with postsecondary education, the state made concerted effort to improve access to students across the state via online. A new online, course request portal was developed and promoted with secondary education partners.

Postsecondary Response:

Blackfeet Community College implemented online learning software for students taking their Welding/Welding Safety course that allow for online quiz and test taking.

City College strengthened several programs with new technology during the 16-17 grant cycle, including purchasing x-ray phantoms, training DVDs and a portable ultrasound machine for its new Radiologic Technology program. City College also purchased an Alaris Pump for the nursing program as well as Amatrol Trainers and an Electric Relay Training System for its Sustainable Energy Program. Using Perkins funds, City College now offers the didactic piece of its Practical Nursing program entirely online.

Fort Peck community college expanded the use of its Polycom system to deliver lectures to their students from teachers at MSU Northern.

Flathead Valley Community College expanded its one-year Industrial Maintenance Certificate to a two-year Associate of Applied Science degree through the purchase of a hydraulic trainer package. The college also acquired a new gas chromatograph/mass spectrometer, allowing students in chemistry classes to acquire skills on a technologically advanced instrument used in fields such as Practical Nursing, Registered Nursing, Forensics, and Criminal Justice.

Gallatin College used Perkins funds to train faculty on updates made to AutoCAD technology, who then brought the knowledge gained into the classroom for CTE students. Gallatin College also launched a new Photonics, Optics and Laser Associate of Applied Science program in the fall of 2016. Perkins also funded an Aviation Simulator that allows aviation students to practice flying in a variety of environmental situations in a variety of aircraft.

Great Falls College purchased GoVenture simulation software and a headset/microphone for online accounting courses, an electro-mechanical trainer and power and control eLearning system for its Industrial Technology program, a medical cart for the Pharmacy Technician program, and a chest compression unit for its paramedic program. The college also purchased a dental chair and components, oral anesthesia mannequin and digital dental sensor for its Dental Hygiene and Dental Assisting programs, as well as a bronchoscopy simulator and lung kit for respiratory care classes.

Helena College bought an orbital welder that incorporates CNC programming and pipe welding, an ultrasonic flaw detector for the Aviation program, and six new wireless high-fidelity simulators for the Nursing program. The college also purchased five Toughbook computers, a heavy-duty alignment machine and a Cascadia simulator for the Diesel Technology program.

Highlands College provided new software to its Metals Fabrication program as well as access to the Microsoft Office IT Academy to all its CTE students, faculty, and staff as well as to a local high school. The IT Academy provides curriculum and training to prepare students to take Microsoft Office Certification or Microsoft Office Excel Exams.

A Fortus 250 3D printer was set up at the Missoula College West campus and an adjunct faculty member was trained on how to operate the machine. Machining students utilized the printer to create prototypes for their projects and two 3D printing courses were opened to Missoula College students.

Montana State University - Northern purchased a newborn and a 6-month SimBaby for its Nursing program, twenty new infrared thermometers for its Electrical program, and ten GPS units with Topo maps for its Agriculture program.

Salish-Kootenai College increased the use of simulation in the Highway Construction Training program with simulators that allow students to practice operating equipment in adverse conditions. In addition, the simulators allow students to gain hands-on skills while other equipment is being used on the road. The college also expanded the use of technology in the Emergency Services and Medical Assisting programs with simulated phlebotomy arms, a previously-owned EKG monitor, and computer-aided emergency simulations.

University of Montana – Western developed coursework for an online program in infant/toddler education as a means of delivery for students in rural and distant locations.

Miles Community College purchased a Snap-On Diagnostic Thermal Imager and a Snap-On Vantage Ultra Digital Graphing Meter for its Automotive Technology program. These tools are used to train students on new technology they will see in the field and gives them the opportunity to be eligible to test for several industry certificates. MCC also purchased two Gempler's Soil Test Kits for its Agriculture program that allow students to perform 25 soil nitrate tests, 10 soil respiration tests, soil density, soil infiltration, soil texture, and numerous other tests that are critical to learn within this program. Additionally, MCC purchased ten Droid Notepads for the Commercial Driver's License program. As the US trucking industry moves away from paper log books for drivers to keep track of their hours and moves toward electronic devices, MCC is now able to train its students in using this new technology.

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 2016-2017, 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 2016 for Montana's secondary business educators. These workshops focused on instructional strategies and resources for teaching applications from the Adobe Creative Suite and utilizing the Adobe Education Exchange. Additionally, Business Education Specialist Eric Swenson partnered with Mick Karls, Regional Manager for EverFi, Inc., to provide training to teachers on the financial education and STEM curriculum available through EverFi's online platform. The workshops were held in Billings (August 3, 2016), Simms (August 5), and Missoula (August 9).

The Health Science Specialist hosted a Webinar for all secondary health science teachers on the use of phone Apps in the classroom that were featured at the National Health Science Conference in Louisville, KY. 3D software for Anatomy was also demonstrated and discussed (such as Z Space).

The Agricultural Education programs in Montana were provided with a Summer Update. This Update allowed teachers to receive hands on training in Agricultural Mechanics, they specifically looked at improving or creating a safety culture. Teachers participated in applying a ROPS roll over prevention system on tractors at Belgrade High School. Dr. Dustin Perry from MSU has been working with teachers across the state to improve student safety and safety culture in our high school programs.

Roger Hanagriff from The Agricultural Experience Tracker was also at summer update to show teachers how to navigate through the AET online record keeping system. Showing them how tricks to best utilize the system for their records and evaluation as well as students' records.

Family & Consumer Sciences Education Specialist organized and conducted a three-day professional development conference in Bozeman, "Linking FCS to Current Issues" in collaboration with MSU-Bozeman and Montana FCCLA for Montana's secondary Family & Consumer Sciences teachers. This workshop included local business tours to show how technology is used in textile manufacturing, food manufacturing and food production.

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:

As part of being awarded funds, campuses receiving a Big Sky Pathways grant attended two annual trainings, one in the fall and one in the spring. The fall Big Sky Pathways Coordinators Training was held in Helena September 22-23, 2016. The topics covered were: Perkins Reauthorization Update, Big Sky Pathways Brand and Branding Discussion, Best Practices, CTE Concentrator Data, Montana Department of Labor and Industry Workforce Pipeline Report, Non-Competitive Regional Service Areas for Administration of Dual Enrollment, Decreasing Barriers for Students to Take Placement Exams for Dual Enrollment, Campus Surveys, Home School Student Guidance, and the Impact of the Chase JP Morgan New Skills for Youth Phase I Grant. The spring training was held in conjunction with a best practices conferences of the National Alliance of Concurrent Enrollment Partnerships Western Regional Conference, held in Missoula Montana April 3 & 4. In addition to program staff, this event drew wide attendance from colleges across the state two-year, four-year, and Tribal. There was strong cross-sector, state and national presence in this conference. Special presenters included Steve Bullock, Governor of Montana, Joe Garcia, President of WICHE, Melinda Karp Community College Research Center, Clayton Christian Montana Commissioner of Higher Education. The conference covered a variety of topics including: Addressing disparity in rural areas, improving student transitions through teacher training and mentoring, accelerated learning in career academy models, building and maintaining high quality programs, student centered advising practices, scaling PTECH models to small and rural schools, building partnerships with business and industry to build program impact, talent pipelines via career mapping tools.

A Perkins Coordinator Training was held in Helena October 5-6, 2016. The topics covered were: Work-Based Learning, Perkins Reauthorization Update, Concurrent Enrollment, Best Practices, Quarterly and Final Reports, Fiscal Management and Time and Effort Reports, Technical Skills Assessments and Student Enrollment Data, Perkins 101 and CTE Dual Credit.

An additional Perkins Coordinator Training was held on March 22, 2016 – many coordinators joined via WebEx while others joined in-person in Helena. This spring training served as a Q&A for the 17-18 Perkins Local Application as well as updates/questions to any reporting or end-of-year activities for the 16-17 grant cycle.

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

Postsecondary Response:

The Montana School Counselors Spring Conference was held April 2017 and featured a half day, off site special session on careers in the automotive industry. The event was sponsored by the Montana Auto Dealers Association and hosted by a local auto dealership Billion Auto Group. The event was designed to dispel the prevalent myth that work in the auto industry is low skill, low wage, dead end employment. It featured a site tour showcasing the technology involved in the service side of a dealership, the clean and collaborative work environment, and opportunities for advancement and continued training/education. The tour was followed by a panel session. The session featured employees from a variety of the dealership's divisions (service, parts, marketing, finance, management) to talk about their careers, compensation, advancement, continued training, and the education/training required for their position. Two colleges were also part of the panel. The colleges showcased the degrees/certificates they offered directly applicable to jobs in service and office, such as collision/repair, auto technician training, and bookkeeping. The colleges received information on careers that they can pass on to their students and parents as well as regional connections with colleges.

City College provided training to Nursing faculty in concept mapping by bringing in a Nursing expert to lead a workshop.

Gallatin College provided an AutoCAD faculty training project with the Design Drafting Program Director and an adjunct Design Drafting faculty providing instruction to 5 Interior Design faculty. Interior Design faculty were trained on AutoCAD for two hours and worked with instructors independently as needed for specific problem solving. This professional development assisted in bringing all the non-tenured track faculty up to the same knowledge level of AutoCAD and how to teach these skills to students in a consistent manner. Gallatin College also offered a professional development opportunity called the Summer Institute for High School Interior Design teachers. This training was completed the last week of June 2016 and fourteen Interior Design secondary instructors attended.

Great Falls College provided a welding professional development workshop on its campus for secondary welding instructors.

Flathead Valley Community College also provided a welding training and certification workshop on its campus for secondary welding instructors.

Helena College provided a workshop for local secondary automotive instructors where college faculty worked to align curriculum in the dual credit automotive course.

In June 2017, Missoula College offered its annual Tips for Teachers Culinary Arts class for Food and Consumer Science teachers. This five-day class introduced a hands-on approach to principles and techniques of authentic Gulf Coast Cuisine, including the history and influence that make the classic dishes from Florida to Louisiana. The objectives of the class were to describe the characteristics, functions, and food sources of the major ingredients and how to maximize authenticity.

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, 2016 in Bozeman. 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. This year's conference focused on building lasting connections with pathways coordinators, their faculty, and the CTE teachers. These conversations help build the colleges plan of work for the coming grant cycle. 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).

Secondary Response:

On October 19, 2016, the 'New CTE Professionals Workshop' was held in Bozeman. 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 31 CTE teachers, one administrator, one secondary counselor, five OPI CTE Staff, and six CTSO State Directors attended.

Business Education

In August 2016, three (3) regional professional development workshops were held for Montana' secondary and post-secondary business education professionals. The Montana Business Education Summer Update Workshops 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 3), Simms High School (August 5), and Sentinel High School in Missoula (August 9). Each workshop focused on instructional resources for teaching graphic design, web design, and multimedia development with the various applications available via the Adobe Creative Cloud and Adobe apps for notebooks/tablets. The Billings session was led by Plevna High School business teacher Bertha Kirschten and Hardin High School business teacher Julie O'Dell, with the Simms session led by Simms High School business teacher Jenny Rohrer, and Sentinel High School business teacher Cindy Schultz led the Missoula workshop. 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. Mick Karls, Regional Manager for EverFi, Inc., provided training to teachers on the financial education and STEM curriculum available through EverFi's online platform. EverFi, Inc., is the leading education technology company focused on teaching, assessing, and certifying students in the critical skills they need to thrive. EverFi's cutting edge digital courses are provided at no charge to schools via partnerships with private-sector leaders and forward-leaning foundations and non-profits. All three workshops were offered at no cost to attendees.

During the 2016 Business Professionals of America, Montana Association Fall Leadership Conference (October 2-3, 2016), Business Education Specialist Eric Swenson provided technical assistance and resources for new and veteran local chapter advisors regarding updates and additions to the Framework for Business Education in Montana and the Montana K-12 Course Codes and Descriptions Reference Manual for Business and Marketing Education. Details regarding CTE and business education professional development opportunities for the 2016-2017 school year were also provided.

On October 20, 2016, 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 Business Education Update 2016: A Business Education/Montana CTE 101 Session, provided attendees with resources and information from the new Montana Business Education Curriculum Resources Binder and information regarding Montana CTE Funding, Montana Perkins and Big Sky Pathways, and Professional Development Opportunities.

On November 10, 2016, 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 2016 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 the 2017 Western Business Education Association Conference, held February 17-20 in Bozeman, Business Education Specialist Eric Swenson presented a professional development session titled 'No Shoes, No Shirt . . . No Dice??? Active Learning Tools from the Dollar Store and Your Junk Drawer'. In the workshop, attendees gained hands-on experience in implementing and participating in some active learning tools for the business education curriculum. All activities could be developed using games, office supplies, toys, and tools teachers may already have in their classroom or in storage—either at home or school. Participants gained the knowledge and skills to develop active learning tools; received resources to incorporate active learning tools into a variety of business education curricula; shared ideas for implementing the various active learning tools; and gained strategies to enhance their level of instruction and student interaction through using and adapting the active learning tools presented.

Agriculture Education

Throughout the year agricultural education teachers had various opportunities to attend professional development. In the fall they can attend one of eight District Leadership Sessions, where they receive updates about the FFA (CTSO) where they hear about new state and national policies. These updates were provided by Jim Rose Montana FFA Advisor.

Family & Consumer Sciences Education

During the month of August, Family & Consumer Sciences Education Specialist Megan Vincent organized and conducted a three-day professional development conference in Bozeman, "Linking FCS to Current Issues" in collaboration with Montana State University-Bozeman and Montana Family, Career and Community Leaders of America for Montana's secondary Family & Consumer Sciences teachers. This workshop included local business tours to show how technology is used in textile manufacturing, food manufacturing and food production. Additional topics included an Early Childhood Education workshop on brain development by a guest speaker from Georgia, Farm to School/Harvest of the Month workshop, Farm to Early Care and Education workshop, FCS Advocacy Tools, Early Childhood Education academic activities, Say Yes to FCS workshop, the State of Montana CTE, and work session time to put all the learned information into an action plan. Speakers included the conference organizers as well as university faculty members, FCS professionals, and business/industry experts.

In October 2016, 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 ProStart.

In October 2016, 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. In April 2017, 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 2017, Missoula College offered its annual Tips for Teachers Culinary Arts class. This five-day class was led by Chef Suzanne Phillips. The class helped FCS teachers to build a repertoire of lessons and industrial kitchen skills on Gulf Coast Cuisine including hands-on approaches, techniques, history/influence, ingredients/methods, characteristics and menu planning/preparation. Also in June 2017, Gallatin College offered a two-day summer Interior Design Workshop – Construction of Curriculum in Secondary Ed in Interior Design.

This course engaged those teaching Interior Design at the High School level in discussions and hands on labs to update Interior Design pedagogy. Tools and techniques used by practicing Interior designers were presented to update skill sets and lesson plans. This class also referenced current trends in Interior Design teaching and learning, with special focus on the social, economic and environmental forces driving change in design.

Health Science Education

Initial teacher preparation in health science is done through a two-week online course and externship.

During MT ACTE, the health science track incorporated master trainer Kim Smith on Brain-based Learning Games in health science. Teachers also went to Riverstone Health for a Public Health immersion and walking tour of the community. The teachers also job shadowed in several departments at St. Vincent's Medical Center.

A separate professional development was offered in May 2016 for the Biomedical Science teachers at SpectrUM Science Center (Brain Research) and at the University of Montana Skaggs Building. Secondary teachers worked alongside biomedical science professors to discuss academic integration and project-based learning. Seniors from the biomedical science programs held a senior project symposium.

Industrial, Trades, and Technology Education

Don Michalsky, Industrial trades and Technology Education Specialist, assisted in planning, attended, advertised, supported, and in some cases helped to facilitate Professional Development Activities, at the State SkillsUSA Leadership and Skills Conference, April 2017, where purposed updated changes within the conference were introduced and discussed.

At the National SkillsUSA Leadership and Skills Conference, Louisville, KY, June 2017, numerous Professional Development opportunities and mini-sessions were provided by business and industry, and were made available to teachers, parents, and chaperones. Some of the newest learning and testing simulators were available to experience on-site.

The annual TEKNOXPO (techno-expo) conference was held in Havre, April, 2017, for secondary teachers and students. This hands-on learning environment gave attendees the opportunity to experience state-of-the art technologies associated with 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 2017, 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, 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.

Great Falls College offered a 30 hour Welding Workshop for teachers. Attendees were able to choose specific Welding processes and positions on which they needed to improve their skills. Class size was limited to 20 participants in order to provide time for one-on-one instruction.

A two-day CWB Welding Instruction was offered in February 2016, at two separate locations (Kalispell & Lewistown). The opportunity provided a two-day interactive course designed for secondary and postsecondary instructors to learn and innovate Welding curriculum and how to use it in their respective institutions,

Because of the tight schedule of multiple industry sponsored Snap-on Tools Certification Training Workshops that were offered at the Helena College Airport Campus in June 2016, not all sessions were available to all attendees. A three-day Precision Measuring trainings was again offered and open to teachers and students in the spring of 2017. Industry Certificates were issued to those attendees achieving a minimum score of 90% in each of the five modules.

Various Automotive Training Sessions are available for Montana instructors, from Portland Community College, Portland, Oregon. The training they offer covers both Automotive, Hybrid, and Diesel Technology. These training workshops are usually offered in May and June, giving instructors an attendance window that is workable.

The Montana Association for Career and Technical Education (Montana ACTE) held an institute in October of 2016 in Bozeman. 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 175 career and technical educators were served: 38 in FCS, 30 in industrial technology, 25 in business, 45 in agriculture, 2 in health science, 27 post-secondary and 10 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:

Gallatin College hosted an event called "Manufacturing Day" that focused on Photonics, Welding, Design Drafting and CNC Machining. At least 10% of the students that attended were female students. Currently, one out of nine students (11%) enrolled in the Photonics program at Gallatin College are female. This event was held April 11, 2017 with 55 students, high school officials and industry members in attendance.

Great Falls College supported the "Trades Rodeo," which served 105 students from eight local and regional high school districts as well as two local middle schools that brought approximately 80 eighth-grade students to the event. Participating vendors included Great Falls College MSU and GFC MSU Welding Program, Missoula College, MSU Northern, Highlands College and Helena College. Other participating organizations were Montana Operating Engineers, Carpenter's Union, Job Service, Salon Academy, JATC Apprenticeship, Institute of Upper Midwest, Great Falls Emergency Services, and Army National Guard. Because students of both genders were invited, this event provided an opportunity to reach younger students and influence non-traditional students to consider these fields.

Helena College hosts an event each year to encourage women to enter the trades called "Women In Gear." This events goal is to attract women into the non-traditional fields of machining, welding, diesel technology, aviation, and automotive maintenance. Helena College also hosted a "Helena College Day," which was held at the Lewis and Clark County Fairgrounds where all the college's programs took equipment and exhibits out to display to the public. This event was an opportunity to showcase non-traditional fields to students of all gender and ages.

Missoula College hosted an “Industrial Expo” for the second year in a row. Approximately 110 juniors and seniors from 10 different high schools attended, accompanied by one to two counselors and/or Industrial Technology instructors from each school. Missoula College Industrial Technology students led the high-school students on tours and described each program as well as shared their thoughts on their program of study. The students participated in many hands-on activities and met the faculty from the six Industrial Program Departments as well as representatives from University of Montana Career Services, Admissions, and Reach Higher Montana. The Commercial Driver’s License instructor also showed the students features of a truck. The Expo was once again met with enthusiasm by Industrial faculty, Post-Secondary Partners, and students. Additionally, the Missoula College Industrial Technology Department hosted two instructional sessions for the YWCA Girls Representing in Trades (GRIT). One session presented information about the Welding and Carpentry Programs. The other session spent one day on welding, one day on carpentry, and one half-day learning about heavy equipment operation where the students had hands-on simulator instruction. The rest of their time was off-campus learning about automotive, bicycle repair and maintenance, Home ReSource, and other community resources. Each session included team building activities and other activities to help the young women understand the gender challenges that women can face in the male dominated workplace. Each of these experiences involved female Missoula College students who volunteered their time to serve as an instructor/mentor.

MSU-Northern held an event called “Women in Traditionally Male Dominated Fields” on February 9, 2017. The purpose of the event was to provide an overview about being a female employee in trades such as electrical, plumbing, welding, automotive, diesel, agricultural mechanics, agricultural technology, criminal justice and civil engineering. MSU-Northern also held it’s popular “TekNoXpo,” which brought 137 students to campus from 19 local and regional high schools for a day of hands-on learning activities that showcase the types of careers students can pursue with the degree/certificate options offered.

Highlands College held “Trades Days,” bringing southwest Montana students to campus to showcase CTE programs. Students were introduced to pathways in automotive, carpentry, welding and machining. Students toured labs and teamed up with current Highlands College students who gave them a hands-on experience.

Salish Kootenai College developed a set of materials for high school females that highlighted the college’s pathways in Information Technology. These materials were used at local high school career and college fairs with the intention of attracting female students to learning about Information Technology opportunities in both secondary and post-secondary education.

Flathead Valley Community College used Perkins funds to pay for 33% of the full-time ABE Coordinator salary, who provided both career guidance and counseling to students pursuing their high school equivalency certificate and to deliver a bridge curriculum for non-traditional students transitioning to college. In addition, the ABE Coordinator developed and delivered contextualized curriculum for students entering CTE college classes, helped ABE students prepare college success strategies and followed up with the students after they entered college to continue providing guidance and counseling.

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. Hour long educational workshops were offered including topics such as How to Pay for College, Teen Peer-to-Peer Traffic Safety Program, Houston-We have a Problem, Interior Space Planning & Design, Falling in Love with Yourself, Giving Proper Recognition, Does Money Grow on Trees, Wholly Guacamole, Dressing for Success, Harvest of the Month, Credit Score Millionaire, Own it with Personality Styles and Leadership, and Let’s Dance. For the second year, we hosted the College & Career Readiness Fair which highlighted the non-traditional fields in FCS and other CTE areas to all attendees. 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 August of 2016. Woven throughout these sessions were discussions on creating gender neutral programs/classrooms, 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 39% 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 2017 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.

WOMEN IN GEAR

Helena College offered the "Women In Gear Program" in October, 2016 at the Airport Campus. The main sponsors are The Boeing Company, The Montana Contractors Association, and Big sky Pathways.

Female attendees were able to experience introductory skills in Welding, Automotive, Machining, and Health Occupations.

Manufacturing Opportunity for Parents and Students,

In September 2016 Spika Design & Manufacturing in Lewistown, MT hosted over 500 students for an in-house, demonstration on manufacturing processes. Many of the undertakings were designed to be hands-on activities based on the grade level of the students, as many of the participants were from area grade schools.

Spika Design & Manufacturing is a World-Class manufacturing company that specializes in the engineering and manufacture of structural aluminum products for such consumers as all branches of the military, aerospace, and manufacturing industries. All products and manufacturing processes meet ANSI and OSHA standards.

Both male and female students were introduced to and experienced: Plasma Cutting, CNC Machining, Blueprint Reading, calculating and constructing devices requiring selection of gears (after watching the gears being made) to achieve a certain gear ratio, along with activities that included Electrical simulations.

In addition, during the preceding evening, parents and instructors were offered a plant tour and the opportunity to experience first-hand, the various stations that were set-up for students.

Great Falls College brought their mobile welding lab along with a certified AWS welding instructor to help with the large number of participants.

Spika Design and Manufacturing is truly a visionary company who wants to educate students, instructors, parents, and councilors and to dispel the stereotype of past manufacturing practices, and how it has evolved into a high technology industry. Several of the current employees were introduced to Spika Design and Manufacturing through this activity when they were attending High School

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:

Highlands College worked with their faculty advisors to provide peer mentoring for students with an emphasis on Perkins special population students. The college also developed and implemented a student-parent program that assisted single parents with academic support and allowed students to bring their children to campus while they received tutoring services.

City College provided extra academic support to assist single parents and displaced homemakers in its online Practical Nursing program, in addition to providing information and encouragement to apply to the Horatio Alger Scholarship to single parents at the college. Three students received this scholarship.

Flathead Valley Community College placed short video clips/modules within D2L (FVCC's learning management system) that could be useful for both Adult Education students transitioning into CTE coursework or those who were already in their beginning CTE courses. These modules target the students who need remedial/refresher modules to be successful in their classes and are available to all CTE faculty to access for their students who need special assistance. In addition, FVCC developed a workforce/career readiness course for CTE students.

Great Falls College hired an Assistive Technology Assistant who provides students with disabilities in using technology to help them with learning, studying, reading, testing, etc. The college also conducted a Start Smart workshop to provide students with salary negotiating skills.

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. The Lifelong Learning Center faculty and staff are trained to provide pre-college assistance to special populations, single parents, and displaced homemakers. 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.

Helena College held two Career Cluster Seminars, one for Health Science and one for Office Technology. The Seminars featured panelists from the business sector, students, and college instructors, enlightening participants about employment opportunities and providing a great venue for college, ABE, and high school instructors to collaborate. Enhancing coordination with ABE, ABE students also attended. Helena College also hosted MCIS and Smart Start trainings for ABE students.

The Salish Kootenai College Director of Academic Success offered a four-day Bridge Program for Adult Education students. The Bridge Program was offered during the summer to prepare ABE participants and completers for the transition to college. The Bridge Program included career exploration, financial aid and scholarship options, an overview of college matriculation processes, and an introduction to college success skills. The Bridge was taught by SKC's Department of Academic Success, which currently houses SKC's ABE program. ABE students who participate in the bridge program have a higher success rate in their first quarter of college and understand and seek out SKC resources to support academic and personal success. Students also feel connected to the academic advisor in their chosen CTE major. Individuals who attended the entire four-day bridge were provided with one 3-credit tuition waiver upon enrollment at SKC.

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 day technical trainings for the BSP Coordinators during the last academic year.

OCHE hosted a two-day technical training for the Perkins Coordinators during the last academic year, as well as a half-day in-person and WebEx training.

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 Erlandsen, were leaders in the Missoula School District CTE Review that was requested by the Superintendent of the Missoula 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 Erlandsen, 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 2016-2017, ten teachers were enrolled the program. FCS Education Specialist also sends out email newsletter updates at least twice a month to all FCS teachers that includes information on a variety of topics.

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.

Technical Assistance for Perkins E-grants was done through presentations for Superintendents and District Clerks at six regional workshops across the state.

Two CTAE staff participated in two district CTE Audits at the request of these district. The goal was to have outside professionals come in to evaluate the CTE programs from middle, high school and the transition to post-secondary. Documents with recommended goals were generated by the audit teams.

Monthly newsletters with related Public Health lesson plans were electronically distributed to all HS teachers.

School districts were divided among each of the OPI CTE Specialists, with each Specialist providing continuing Technical Assistance to each assigned school district, but also in establishing consultation and collaboration between the specialists concerning specific questions that differ between CTE program areas.

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:

0

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

0

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

An RFP was issued for grants used to serve individuals in state correctional institutions offering CTE programs. The RFP was distributed to correctional institutions and promoted. No grant proposals were submitted.

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 member to the national Food and Nutrition Conference in Boston, MA, which allowed her to earn at least 20 continuing education hours on a variety of nutrition topics. The faculty member specifically focused on sports nutrition and learned about assessing student knowledge on nutrition information with a tool called Athlete and Fitness Discussion.

University of Montana – Western worked with curriculum development professionals to develop six new courses for the infant/toddler program including (1) language and communication, (2) disabilities, (3) family-centered intervention, (4) social, emotional and mental health intervention methods for young children at risk and with disabilities, (5) evidence-based practices for infants and toddlers, and (6) foundations of infant/toddler delivery.

Gallatin College trained Interior Design instructors on AutoCAD, which helped bring non-tenured track faculty in the Interior Design program to the same knowledge level in order to teach students consistent skills. Gallatin College also held a Summer Institute for fourteen secondary Interior Design instructors. These teachers learned about the current field of interior design from industry leaders in the region and about the college program's alignment with industry needs. Teachers that attended received training that better allowed them to potentially teach their courses as dual enrollment at their high schools.

Secondary Response:

As mentioned above, the FCS Education Specialist offered a three day FCS Summer Conference with MSU & Montana FCCLA in August of 2015. For the eighth 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 2016, 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.

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 2016-2017, ten teachers were enrolled the program.

In October 2016, 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 2016-17 grant year nine 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. A primary focus of which is increasing the availability of dual enrollment in CTE areas.

2. Supporting career-focused 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 activities for secondary, postsecondary and/or industry partners.
6. Promoting Big Sky Pathway awareness.

The culmination of these efforts resulted in the development of 52 new or renewed pathways. There were 14 health sciences pathways, 11 in manufacturing, 9 in Agriculture, 4 in IT, 3 in architecture and construction, 3 in Finance, 3 in business, 4 in hospitality and tourism, and one in law and public safety.

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 Office of Public Instruction 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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Montana

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:

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.

Great Falls College writing faculty attended online courses and conferences provided by the Society for Technical Communications to improve the writing courses required by the trades programs. The college also purchased clinometers and angle rulers for trades math courses as well as biology models and study aids to assist CTE students in biology classes required for health sciences programs. The college set a goal to increase the use of the center for biology, health science and anatomy and physiology tutoring – they were successful as they increased the number of visits from 668 in 2015-2016 to 807 visits in 2016-2017.

Helena College provided a math lab for students taking Technical Mathematics, which was required as a corequisite for students who scored low on their placement tests. The college also purchased student access to an online tutoring system called “Smarthinking,” which provides 24/7 tutoring services to students in writing and mathematics.

Montana State University – Northern began placing a math tutor in its Automotive and Diesel program classrooms to help students understand how to apply certain mathematical concepts in these fields.

Highlands college provided individualized tutoring services to specific CTE programs. For example, students enrolled in the Automotive and Lineman programs received tutoring in small groups with math content designed specifically for those programs. Content was developed to provide students with math problems to demonstrate the relevance of math in their chosen degree programs.

Secondary Response:

During the 2016 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 assistance from Secondary business educators Julie O’Dell, Bertha Kirschten, Jennifer Rohrer, and Cindy Schultz and Mick Karls, Regional Manager for EverFi, Inc., conducted three (3) regional professional development workshops in August 2016 for Montana’ secondary and post-secondary business education professionals. The workshops provided Montana business educators to gain instructional strategies and resources for using the Adobe Creative Cloud and EverFi’s online platform to enhance STEAM instruction within the business education curriculum. The workshops were held at Skyview High School in Billings (August 3), Simms High School (August 5), and Sentinel High School in Missoula (August 9).

As mentioned above, the FCS Education Specialist offered a three day FCS Summer Conference with MSU & Montana FCCLA in August of 2015. This conference included a workshop on integrating academic activities into Early Childhood Education. The previous Literacy in CTE and Math in CTE work down with FCS teachers in also part of a continual conversation during best practices discussions throughout the year.

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

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. Nine 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.

Highlights from Big Sky Pathways

This grant year campuses were awarded funds to pursue a wide variety of activities outlined in the RFP. Of the awarded campuses, six had coordinators new to the program. Despite having a steep learning curve with training, mission alignment, and new program processes, Strengthening Big Sky Pathways had an impressive year. The activities listed below are by no means all inclusive.

Pathways

The dreaded Pathways paperwork process was finally digitized! With a new faster signature process through Adobe e-sign, coordinators were able to initiate 52 pathways or pathway renewals this grant cycle, 45 of which were completed by the renewal deadline. By using Adobe sign, paperwork is not lost on desks or filing cabinets. When teachers leave for the summer, the document remains in their inbox still waiting to be signed, with timely reminders to gently nudge the process along. Completed documents are then emailed to all signers, posted on the OCHE website in full color, and sent to MCIS for upload into course planner. There were 14 health sciences pathways, 11 in manufacturing, 9 in Agriculture, 4 in IT, 3 in architecture and construction, 3 in Finance, 3 in business, 4 in hospitality and tourism, and one in law and public safety.

Increasing Pathways Visibility

Several campuses increased the visibility and messaging of Big Sky Pathways in the past grant cycle. Helena College continued to augment their always impressive web presence in Big Sky Pathways (http://www.umhelena.edu/admissions_enrollment/careerpathways.aspx). Highlands College launched a Jump Start page that integrated BSP messaging throughout (<http://jumpstart.mtech.edu/>). Missoula College also added BSP language to their website to better define its role in student opportunities (<http://mc.umt.edu/dualenrollment/career-pathways/default.php>). Several colleges increased their efforts in print materials by creating handouts, posters, flyers, and newsletters for students, parents, counselors, teachers, and the public. These materials are distributed at the myriad of outreach events attended or held by coordinators throughout the year, either in coordination with school partners or as stand-alone events. Along with these efforts, as per the RFP (http://mus.edu/BigSkyPathways/resources/SBSP_rfp2015-2016finalrevised.pdf), many programs increased the data associated with students engaged in and with their programs. These are often reported by colleges in their quarterly student/industry engagement activities, some examples are given below.

Connecting the Classroom to College and Career

TechNoXpo

200 students, 14 industry partners, 24 industry reps. About 300 attendees (students, faculty, industry, college student volunteers, high school staff). Hands on activities to give students exposure to in-demand careers available through 1 and 2-year degrees and certificates. Student focused activities during the day included: equipment rodeo, production of biofuel, advanced agriculture implements and techniques, automotive stations, plumbing and electrical basics, bridge building, and an intensive nursing exploration.

Manufacturing Day

Manufacturing Day held twice a year at local manufacturing facilities 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 get 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 first event as well.

Women in Gear

10-40 Student and 10-15 parent participants had hands-on experiences and saw demonstrations in Automotive Technology, Diesel Maintenance, Aviation, Welding, Computer-Aided Manufacturing, Fire & Rescue, Information Technology, and Health Science. The day featured information about pathways and panelists working in these fields. A tour of the Boeing Plant was a highlight of the options offered to students.

Student Shadow Days

Students from area High Schools attend at the college in a program of their choice for 2-3 days each to "shadow" a student, who, in turn grades the student on their attention, questions, activities, etc.

College for a Day

Several campuses offer students the opportunity to come to campus for the day as part of Big Sky Pathways. These events allow the program to showcase student opportunities to prepare for postsecondary early via Big Sky Pathways.

Trades Rodeo

More than 150 students and their teachers/counselors from across central Montana 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.

Norco/Miller Expo

This event was extremely successful 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. Students showed a lot of interest in technical programs. 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.

Health Wise Expo

This after school event brought 30-40 participants (students and parents) from two different high schools interested in health care. College students and faculty explained different postsecondary degree programs in health care. There were demonstrations of the SimMan and computerized patient simulator, students were able to participate in some of the different program labs, for example 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.

Work Based Learning

Several campuses increased their coordination between BSP 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 this year via RevUp).

Connection with Industry

Coordinators are involved with a wide variety of program advisory boards as well as local business and industry networks (for example: Billings Works, Prospera Business Network, Local and State Chamber of Commerce, etc.) It is through these relationships that higher levels of engagement with secondary are achieved, particularly at Pathway events. BSP program staff attended or facilitated more than 70 advisory events over the grant cycle. Some of these events were co-convened high school, college, industry advisories, which is an encouraged best practice in the state.

Training Teachers

Welding Summer Camp for Teachers

This weeklong camp for teachers allows them 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.

Job Shadow/Externship for Secondary Faculty with college faculty

Six secondary faculty were provided the opportunity to tour programs, visit with post-secondary faculty 1:1, 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 Faculty.

Snap-On Tool Training

Teachers were offered the opportunity to select the tools targeted for the training, and then the training was offered to them at little or no cost via Pathways.

MT ACTE

All grant awardees that had the position staffed by October 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.

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 who program graduates. After a shared information session, the Seminar breaks into pathways and HealthCARE Montana groups. Pathways documents were completed at following the seminar.

Increasing CTE dual enrollment

CTE dual enrollment is starting to make strong gains in the state. CTE dual enrollment has grown 5% in the past two academic years, which now puts the program distribution on average with national trends (~70% Gen.Ed. 30%CTE). The system is striving for a goal of near equal distribution, with particular focus on new and emerging fields in priority pathways of business, IT, health care, manufacturing, and technology.

Reporting of Fall courses are not complete yet so it is difficult to fully assess the impact of the work done in BSP to increase CTE dual enrollment in the 2015-16 grant year (generally courses planned roll the following academic term or year). The most recent assessment of new courses created showed gains in welding courses, computer science, accounting, computer applications, criminal justice, and technical math. Owing to the strengthened ties of CTE education to two-year education's labor market demands, we anticipate some gains in health science and business, although it is too early to tell. However, there are some highlights to report.

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

FVCC is doing a lot of work in welding and health science. They have 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 health sciences offerings in their region and Gallatin College has added interior design to Great Falls and Billings.

Other Highlights

Blackfeet Community College worked closely with the TERO business office as well as the Blackfeet Housing Authority to get Building Trades students and Basic Electrical students involved in hands-on learning on new building sites. After completion, six Building Trades graduates were offered summer internships through Blackfeet Housing Authority.

Great Falls College provided carpentry instruction and hands-on training for employees of a local construction company called Dick Anderson Construction. Seven employees completed Levels 1 and 2 and three supervisors completed supervisor training. Welding faculty completed internships at industry partner businesses to learn current practices to bring back to the classroom and better prepare students for the workforce.

Missoula College held several parent nights either at the college's campus or at local high schools to inform parents of CTE dual enrollment opportunities.

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 November 10, 2016, 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 2016 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 FY2017, 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 October 2016, 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 ProStart.

Health Science- OPI was awarded a CCSSO/JP Morgan Chase-"New Skills for Youth" Phase I grant (June-Dec 2016), that brought together multiple stakeholders throughout this six month period. While NSFY funding was used for travel expenses of the partners, the health science specialist paid for travel and lodging using Perkins funding.

July- Multi-state partnerships for Curriculum and Professional development training

Secondary Health Science curriculum aligned with post-secondary allied health common core

Collaborative Tribal agency meeting with Fort Peck Tribal members and four secondary schools

Monthly meetings to bring together business and industry stakeholders

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

Yes

State Response:

The Office of the Commissioner of Higher Education and the Office of Public Instruction spent significant time redesigning career pathways informational materials. This included the formation of a new format for communicating career pathways to students, teachers, counselors, and parents as well as a streamlined process for schools to participate in Perkins funded career pathways.

Postsecondary Response:

Flathead Valley Community College used Perkins funds to pay for 33% of the full-time ABE Coordinator salary, who provided both career guidance and counseling to students pursuing their high school equivalency certificate and to deliver a bridge curriculum for non-traditional students transitioning to college. In addition, the ABE Coordinator developed and delivered contextualized curriculum for students entering CTE college classes, helped ABE students prepare college success strategies and followed up with the students after they entered college to continue providing guidance and counseling.

Great Falls College used Perkins funds to support a contract with Job Service to provide the services of a workforce adviser, who conducted individual and class sessions on career guidance, resume assistance, interviewing skills, etc.

Helena College used Perkins funding to allow Student Support Center to purchase a camera and lens with accessories to demonstrate the interview process to students. This enabled students to view themselves during an interview. Perkins funding was also used to support a professional development activity for college faculty to help students improve their soft skills prior to entering the workforce. This was recommended by several of the advisory boards and therefore Helena College is addressing this concern by integrating work ethics training into the skills based curriculum. Perkins funding was also utilized to purchase College Student Inventory tools to help students become aware of their college readiness and their career choices.

Missoula College hosted an Industrial Expo for the second year in a row. Approximately 110 juniors and seniors from 10 different high schools attended, accompanied by one to two counselors and/or industrial tech instructors from each school. Industrial Technology students led the high school students on tours and described each program as well as sharing their thoughts on their program of study. Partial funding was used for a CTE Advisor to provide assistance to faculty advisors, refer students to necessary services, work as a liaison with the University of Montana Office of Student Success, review max credit appeals, complete graduation applications, create academic plans, and assist students with registration. The advisor works with faculty, departments, and University of Montana Career Services to provide accurate career information and options. Perkins was also used to provide three-month funding for an Industrial Technology recruiter/advisor to assist with enrollment activities with emphasis on Welding and Machining.

Highlands College offered a Montana Tech Success course for all CTE students that included a hands-on advising component that requires students to participate in career exploration activities and meet with their advisor on a bi-weekly basis. In addition, Myers-Briggs Career Assessments were administered to CTE students in various large enrollment courses by a Myers-Briggs certified specialist. The Myers-Briggs certified specialist was also available to CTE students for follow-up appointments throughout the academic year.

Salish Kootenai College hosted an MCIS Training Workshop for six high school teachers and high school and middle school counselors from regional schools on May 17, 2017. This outreach activity provided information about Big Sky Pathways curriculum, strengthening career and workplace counseling, and identifying academic planning including dual enrollment opportunities.

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 44,221 portfolios were created using MCIS in 221 high schools, with a total of 85,426 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 FY17 report and FY18 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. 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. The CTE areas making the strongest gains are aligned with workforce needs: IT, manufacturing, health science, and finance. This work is ongoing through Big Sky Pathways.

Postsecondary Response:

Nine 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, work-based learning experiences, and industry recognized credentials; 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 52 new pathways with Montana high schools in 16-17. 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.

Blackfeet Community College offered new dual enrollment courses in Welding and Welding Safety to Browning High School.

Flathead Valley Community College added new Welding dual enrollment classes with three local high schools, as well as an Accounting dual enrollment course with one local high school. FVCC added eleven new pathways as well as eleven new dual enrollment courses.

City College developed new pathways in Transportation, Computer Technology and Health Sciences. City College also added new dual enrollment classes in Web Design, Automotive Brakes, Automotive Electrical, Emergency Medical Technician, and Introduction to Business. City College implemented a pilot program to offer Dual Enrollment courses in high schools free of tuition beginning in Fall 2016 – the tuition-free pilot saved students \$91,361.

Gallatin College implemented eight new dual enrollment courses with six different area high schools. The CTE courses include Accounting, Biology, Computer Science, Interior Design and Welding.

Highlands College used Perkins funds to purchase the IT Academy software that allowed staff, students, and teachers at secondary schools to receive training and industry recognized certification in various Microsoft Office applications. Students enrolled at Whitehall High School participated in the IT Academy during the academic year with all students enrolled in their computer course and all students completed the certification tests.

Missoula College created seven new pathways with area high schools and added fourteen new dual enrollment courses.

All participating 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 events that allows students to meet 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 CTOSs 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 CTOSs. In addition, he attends the meetings of the two CTSO Boards with the Montana BPA Board meeting held in July 2016 and the Montana DECA Board meeting also in July 2016. Additionally, the Business Education Specialist served as a competitive events judge at the Montana BPA Region 3 Leadership Conference (January 16, 2017), Region 4 Leadership Conference (January 4, 2017), the Region 5 Leadership Conference (January 10, 2017), and the Region 6 Leadership Conference (December 19-20, 2016) as well as the Montana DECA State Career Development Conference (February 12-14, 2017) and the Montana BPA State Leadership Conference (March 12-14, 2017). Furthermore, Business Education Specialist Eric Swenson served as a competitive events judge at the Montana FCCLA State Leadership Conference (March 19-21, 2017). Lastly, Business Education Specialist Eric Swenson assisted with the facilitation of Montana BPA's Fall Leadership Conference (October 2-3, 2016) 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.

HOSA-Future Health Professionals October Fall Leadership Workshop (Oct. 4) offered a separate track for HOSA Chapter Advisors on Health Information Technology, taught by the HIT professors at MT Tech.

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, and the presentation of a CTSO workshop during the Montana ACTE Institute, October, 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, January, June) and all State Executive Council meetings (August, January, March, June). In October 2016, she provided leadership, coordination and presented at the third annual Montana FCCLA Leadership Rally. Megan Vincent represented Montana FCCLA at the national State Advisers Management Meeting in January 2017.

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:

SELT (State Executive Leadership Team) 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. Through a collaboration with the Montana Department of Labor and Industry, over 20 new apprenticeship opportunities were either designed or implemented, including apprenticeships in allied health, electrical, and IT occupations.

Postsecondary Response:

Missoula College used Perkins funds to offer five credits of Computer Tomography (CT) courses delivered in an online format to students in the Radiologic Technologist AAS program. The online CT courses allow students who are already working in the field for clinical experience to take courses at the same time.

Salish Kootenai College used Perkins funds to support further development of the Medical Assistant Program, which includes two quarters of a "practicum" or internship during the second year of the program. SKC also used Perkins funds to support development of the Emergency Medical Technician course, which includes 24 hours of "Ride-Along" as an unpaid internship. Additionally, the new Office Administration Program, developed with partial assistance of Perkins for the faculty member developing curriculum, includes two internships in the second year of the program; these will be conducted in partnership with local businesses.

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:

In September, the State Governor Steve Bullock, held a conference titled, "Main Street MT Project Beyond the Classroom" that was attended by all CTE specialists and the CTAE Division Administrator.

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 Past-President for the National Association of State Administrators of Family & Consumer Sciences (NASAFACS) from July 2016 until June 2017. In this capacity, she worked with business and industry on a national level to support FCS programs across the United States as well as organizing a national level conference in Chicago, IL in May 2017. 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 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.

During the FY 2017 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 Orlando, Florida, along with conference calls during the school year.

Beginning July 1, 2016, Business Education Specialist Eric Swenson began serving a two-year term as Secretary of the Western Business Education Association (WBEA) and a member of the WBEA Executive Committee. As a member of the WBEA Executive Committee, responsibilities include managing all affairs of the Western Business Education Association—the regional division of the National Business Education Association—and working with business education and business/industry leaders from across the western US to plan professional development events and leadership activities and to enhance benefits for WEBA members.

During FY 2017, Business Education Specialist Eric Swenson served as the Program Chair for the 2017 Western Business Education Association Conference. As the Program Chair, he worked with business education professionals and business/industry leaders within Montana and the western United States to provide professional development training and instructional resources for business education professionals at the middle school, secondary, and post-secondary levels. The 2017 Western Business Education Conference was held February 17-20, 2017, in Bozeman.

Starting in 2016 and continuing into 2017, the Industrial Trades and Technology Education Specialist, Don Michalsky, has met with the Montana Automobile Dealers Association (MTADA). Regional HUBS were formed, where a postsecondary institution offered an Automotive Program. Area dealerships were encouraged to participate. The ultimate goal being to funnel high school students on to a postsecondary program, and then, after program completion, gain employment at a member dealership.

But a major part of the plan is a mutual partnership between the secondary programs, postsecondary programs, and the dealerships where the dealerships are taking an active role to assist the programs and students to achieve success.

The HUB cities where the meetings have and will continue to take place are: Havre, Helena, Butte, Miles City, and Billings.

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:

City College used Perkins funds to support curriculum development for a new Ultrasound Technology program.

Gallatin College used Perkins funds in the development of the new Photonics program as well as for a new flight simulator in the Aviation program. With the new flight simulator students can experience different types of planes and instruments. Not only do students experience different types of "equipment" they also experience different types of flights, because the weather experience also changes.

Great Falls College purchased GoVenture simulation software and a headset/microphone for online accounting courses. The accounting program is now offered completely online, which greatly benefits distance-education students (though face-to-face classes are still offered for students who wish to attend class in-person).

Helena College used Perkins funding to support the development of its Fire and Rescue program to be offered at a distance. The program is now also being offered via distance education in Missoula and Livingston.

Missoula College used Perkins funds to support the Machining Program in the development of second-year courses, which included embedded industry certifications (NIMS). Perkins funds were also used to create a Welding CAS on the Bitterroot Campus in addition to adding a second cohort to the Welding program offered in the evening at the Missoula College main campus.

Salish Kootenai College used Perkins funds to support the implementation of the Emergency Services Program, a one-year Certificate of Completion that includes Emergency Medical Technician, Hazwoper 24, crisis communication, and other technical skills courses. SKC also used Perkins funds to support the faculty development of a Medical Assisting faculty, who will now be able to offer a Phlebotomy course.

University of Montana – Western developed coursework for an online program in infant/toddler education as a means of delivery for students in rural and distant locations.

Secondary Response:

As previously reported, Business Education Specialist Eric Swenson conducted three (3) one-day regional professional development workshops in August 2016 for Montana's secondary business educators. These workshops focused on instructional strategies and resources for teaching applications from the Adobe Creative Suite and utilizing the Adobe Education Exchange. Additionally, Business Education Specialist Eric Swenson partnered with EverFi, Inc., to provide training to teachers on the financial education and STEM curriculum available through EverFi's online platform. The workshops were held in Billings (August 3, 2016), Simms (August 5), and Missoula (August 9).

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 FY2017. 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.

A new CTE course for Health Literacy and Social Determinants of Health was piloted at one location to determine scope, pacing and student relevance. This was done as a joint project between the state Area Health Education Center and the Health Science Education Specialist.

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

No

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

Yes

Postsecondary Response:

Flathead Valley Community College hosted a week-long 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 learned 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. FVCC also hosted a "Pathway Workshop" in March, 2017 for Business Management and Administration secondary and post-secondary educators. The business specialist from the Office of Public instruction joined the event to provide guidance on identifying and aligning high school curricula with the college's curricula. A similar "Pathway Workshop" was held April, 2017 for Agriculture educators as well.

Great Falls college provided professional development for numerous faculty with the goal of improving knowledge and skills, as well as retention of the faculty. The college also held a welding workshop in June for secondary teachers in industrial technology to improve their welding skills and knowledge.

Missoula College hosted a regional National Alliance of Concurrent Enrollment Partnerships (NACEP) conference. The Pathways Coordinator organized a plenary panel with instructors and administrators from Missoula College, Sentinel High School, and Corvallis High School who shared dual enrollment processes at Missoula College, which included challenges and resolutions. Perkins funds paid the registration fee for secondary staff on the panel. The coordinator met with a counselor from Alberton High School, which led to discussions on possible dual enrollment courses. Because of this meeting, Alberton High School is anticipating offering their first dual enrollment course in FY18. Sessions attended were on growing concurrent enrollment, program management, online learning, and concurrent enrollment data in Montana.

Highlands College provided professional development for three faculty members whose previous education and work experience was not in education. The professional development trainings provided information on best practices used in the teaching profession to help CTE students enrolled in two-year education be successful.

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 2016-2017, ten teachers were enrolled the program.

The OPI Learning Hub hosts a free online course for secondary science and/or health enhancement teachers to become Health Science teachers. This is a two-week course as well as a week-long externship that teachers must take in order to qualify for a Class 4A Health Science Teaching Endorsement.

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.

On November 10, 2016, 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 2016 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 19, 2016 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.

The Industrial Trades, and Technology Specialist, Don Michalsky, has, on a few occasions, met with faculty from both MSU-N and the College of Great Falls to address these very issues. Strategies were discussed and tentative plans have been formulated. The CTE division of OPI has agreed to support and assistance in achieving proposed goals. On a related issue, each CTE Specialist has reviewed endorsements and Course Codes for their areas to clarify specific curriculum that can be taught in each endorsement area. The CTE Division of OPI is also in the process of reviewing the requirements for a person wanting to transition from industry to teaching.

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

No

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Step 4: Technical Skills Assessment

Provide a summary of your state's plan and timeframe for increasing the coverage of programs entered above.

Enter the number of students assessed for technical skill attainment, and the total number of CTE concentrators reported for the program year. The percent of students assessed for technical skill attainment will be automatically calculated.

Population	Number of Students in the Numerator	Number of Students in the Denominator	Percent of Students Assessed
Secondary Students			
Postsecondary Students			

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Step 8: Program Improvement Plans

Extension Requested?

Yes

Required Program Improvement Plans

Directions: Your state has failed to meet at least 90% of the state adjusted level of performance for the core indicators of performance listed in the table below. Please provide a state program improvement plan addressing the items found in the column headings of the table below.

Core Indicator	Disaggregated categories of students for which there were quantifiable disparities or gaps in performance compared to all students or any other category of students	Action step to be implemented	Staff member responsible for each action step	Timeline for completing each action step

Local Program Improvement Plans