

Consolidated Annual Report, Program Year 2017 - 2018 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 2017, 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

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 Montana Career Pathways and better links LEA Student Accounting programs to the Montana Career Information Web Based site.

Postsecondary Response:

The position of Director of Workforce Initiatives and Information was maintained and had 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 allowed for the data collection and analysis to remain a priority for OCHE. The Compliance and Workforce Data Analyst spent 50% of their time working strictly Perkins performing workforce data collection, analysis, reporting, and industry engagement. This position was also responsible for reporting the postsecondary performance indicators on the Consolidated Annual Report.

Consolidated Annual Report, Program Year 2017 - 2018 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 2017-2018, Flathead Community College and Salish Kootenai College received monitoring visits. 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.

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.

Postsecondary Response:

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

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 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. An online, course request portal was maintained with secondary education partners.

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 2017-2018, 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 July and August 2017 for Montana's secondary business educators. These workshops focused on instructional strategies and resources for teaching financial literacy/personal finance utilizing the Hands on Banking curriculum and for teaching computer science principles using the complete CS Unplugged collection of learning activities. Additionally, participants began the journey to earn Cyber Teacher Certification via LifeJourney's National Security Administration Day of Cyber. The workshops were held in Kalispell (July 31), Billings (August 2), and Helena (August 4).

The Health Science Specialist Renee Erlandsen hosted a national Webinar for secondary health science teachers on Innovative Work-based Learning Opportunities. We revised two health science courses that are hosted and taught through the Montana Digital Academy to improve the students' experience using technology. "Understanding Healthcare: an Introduction to Teaching Health Science" was offered online through the OPI Learning Hub as a two week course to recruit science and health enhancement teachers. This has proven to be a productive way to increase health science teachers across the state.

The Agricultural Education Specialist collaborated with Montana State University, Montana Association of Agricultural Educators (MAAE), Lab Aides Science Presenters, to provide curriculum support and technical skill updates to the teachers. Teachers attending Summer Update received a continuous curriculum on building a Safety Culture, they worked on ATV safety at this year's Agricultural Mechanics Program presented by Dr. Dustin Perry. They also received some Natural Resources instruction and STEM based curriculum materials through Lab Aides. During the conference they worked with Fishing Guides to learn about industry opportunities in Montana and develop skills to teach lessons in their programs.

During the year teachers also receive updates from our Google Groups platform, eight Regional Leadership Seminars, Fall MACTE Conference and Winter MAAE meetings.

Family & Consumer Sciences Education Specialist Megan Vincent organized and conducted a five-day class/professional development opportunity "Design, Connect, Prepare" in collaboration with MSU-Bozeman and Montana FCCLA for Montana's secondary Family & Consumer Sciences teachers. This workshop included instruction on incorporating technology into the classroom and the use of google classroom.

Industrial Trades and Technology Education

Welding Workshops held on postsecondary campuses during June 2018, specifically incorporated instruction Gas Tungsten Arc Welding (GTAW), commonly known as Tungsten Inert Gas (TIG) Welding. Welds are stronger and of higher quality compared to some other processes.

The process uses a non-consumable tungsten electrode to create the arc and the heat. A filler rod made of the same material as the base metal is introduced into the arc. An inert gas, usually Argon or Helium is used as a shielding gas to protect the weld from atmospheric contamination. The process is complex and very difficult to master. The TIG process is routinely used in welding aluminum, stainless steel, magnesium and other non-ferrous metals because of the concentrated heat with less distortion.

Although this welding process is very common in industry, many small high school instructors have had limited access to learning the process. The goal is that all high school instructors become somewhat proficient in the process and encourage those programs that do not possess welding machines capable of TIG welding, to obtain a machine with TIG capability to expand and improve the welding skills of their students.

Postsecondary Response:

City College's Perkins coordinator attended the STEM conference at MSU Bozeman in August 2017. Nursing faculty attended training to learn how to use the Noelle simulator. Perkins funding was also used to provide Key Centrix software for the Pharmacy Technology program, purchase an Amatrol Mechanical Drives Trainer, an aluminum welder and a welding Haberl cold saw. Faculty was also able to attend the Online Learning Consortium Innovation Conference in April 2018.

Dawson Community College used Perkins funding to send their web development team to the National ACTE conference to learn more about CTE. They also contracted to have chemical dependency classes for licensed addiction counselors developed for online offering.

Flathead Valley Community College purchased two phantom drones for a new course in unmanned aerial systems, tablets for mobile mapping platforms to collect spatial data, a flaw detector that uses ultrasound technology to detect flaws in composite materials or welds, a nuclear magnetic resonance spectrometer for use in the Medical Lab Technology AAS, Criminal Justice AAS, and the Brewing and Brewery Operations AAS programs, a survey-grade drone for use with UAS mapping technology, a hi-fidelity birthing simulator and two bright field microscopes.

Gallatin College purchased laser kits, thermal power/energy laser measurements sensors, and a single high-powered laser for the photonics program.

Great Falls College purchased an Industrial Tech robotics learning system, which allowed the college to offer valuable technical training in robotics. The SIM hospital upgraded its AV system to improve learning in the simulated environment. A fluke tester was purchased for Fundamentals of Voice and Data Cabling course.

Helena College expanded technology by purchasing a new CNC lathe for the machining department. The aviation maintenance program was also able to update their area by purchasing new aircraft scales. The scales that were previously being used were old and out of calibration and were no longer able to be used for instruction. Programs in computer technology purchased new sensor kits and technology was expanded for those students by increasing the programming capability for the Raspberry Pi Computers.

Highlands College re-developed and expanded the use of technology in the Automotive Department for this grant cycle. Perkins funds were specifically used to expand the use of technology in the Metals Fabrication Program by providing software licenses for MasterCam in the classroom. Also, Perkins funds were used to offer the use of the IT Academy to students, staff and faculty. In addition, the IT Academy was also available to area Montana Career Pathway partners such as area high schools, Adult Learning Centers, the Job Service, Montana State Prison and Vocational Rehabilitation.

MSU Northern increased technology in many classrooms and labs, which were all suggested by advisory boards for CTE programs.

SKC is continuing to expand the use of TracDat (now called Improve) to track learning outcomes and program planning for CTE programs. Improve allows CTE programs to complete an annual review of student achievement of learning outcomes and determine methods to improve student learning. SKC purchased new computers for the grants management and administrative assistant programs, allowing students to use current software and earn a certification in Microsoft Suites. The Medical Assisting Program is moving to an online supported learning system that provides tutorials, assessments, and learning support materials in a package used throughout the two years of the program; this technology was reviewed through Perkins funding and will be implemented in 2018-2019.

Montana Western worked on two projects during FY18. The first project focused on expanding CTE programming, especially secondary to postsecondary transition offerings. The second project focused on equipment purchase. While the first project will never truly be complete, the institution made gains in developing new dual credit memoranda of understandings (MOU) with three Montana high schools. The MOUs focused on expanding access to early childhood education certificate coursework via concurrent-credit offerings taught by family and consumer science teachers.

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

State Response:

A Perkins Coordinator Training was co-held with the Montana Career Pathways Coordinators in Anaconda, MT on October 19-20, 2017. The topics covered were: Major Trends in CTE/Career Readiness, Federal Update and Q&A with Deputy Executive Director of Advance CTE Kate Kreamer, Sector Partnerships and Industry-Drive Approach to Work-Based Learning, Supporting Students with Information and Resources for College, LEAD Presentation, and an overview of the Consolidated Annual Report.

An additional Perkins Coordinator Training was held on March 23, 2017 – many coordinators joined via WebEx while others joined in-person in Helena. This spring training served as a Q&A for the 18-19 Perkins Local Application as well as updates/questions to any reporting or end-of-year activities for the 17-18 grant cycle. The group also discussed updates to Dual Enrollment in Montana and bringing professional development opportunities to each campus.

Campuses receiving a Montana Career Pathways grant attend two annual trainings, one in the fall and one in the spring. The fall Montana Career Pathways Coordinators Training was co-held with the Perkins coordinator training at the Montana ACTE Fall conference in Anaconda, MT. The topics covered were: Major Trends in CTE/Career Readiness, Federal Update and Q&A with Deputy Executive Director of Advance CTE Kate Kreamer, Sector Partnerships and Industry-Drive Approach to Work-Based Learning, Supporting Students with Information and Resources for College, LEAD Presentation, and an overview of the Consolidated Annual Report. The spring training was held in Bozeman, Montana March 1-2. Topics covered included Dual Enrollment's Influence on the Socialization of Students, Creating Authenticity in the Classroom, Informing our Practices, OPI's Support of MCP and Dual Enrollment, End of Course Surveys, Industry-Led K12 Partnerships, Dual Enrollment-Embedded Pre-Apprenticeships, Free Concurrent Enrollment Tuition Pilots, Enrolling Underage Students, and Perkins RFP Discussion.

Biweekly technical assistance calls were held for both Montana Career Pathway and Perkins Coordinators.

Secondary Response:

On October 18, 2017, the 'New CTE Professionals Workshop' was held at Fairmont Hot Springs. 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, seven OPI CTE Staff, and five CTSSO State Directors attended.

Business Education

During summer 2017, three (3) regional professional development workshops were held for Montana' secondary and post-secondary business education professionals. The Montana Business Education Summer Update 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 updates were held at Glacier High School in Kalispell, Skyview High School in Billings, and Capital High School in Helena. Each update focused on instructional materials for teaching financial literacy/personal finance via Hands on Banking®, computer science enrichment and extension programming resources utilizing CS Unplugged, and training on the National Security Administration's NSA Day of Cyber and the Cyber Teacher Certification program. All three sessions were led by Business Education Specialist Eric Swenson. Additionally, all attendees were provided with an update on Montana business education and career & technical education programming, including the transition to statewide career pathways via the Montana Career Pathways, and funding.

During the 2017 Business Professionals of America, Montana Association Fall Leadership Conference (October 8-9, 2017), 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, the Montana K-12 Course Codes and Descriptions Reference Manual for Business and Marketing Education, and details on the new statewide pathways as part of the transition from Big Sky Pathways to Montana Career Pathways. Details regarding CTE and business education professional development opportunities for the 2017-2018 school year were also provided.

On October 19, 2017, 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 Montana Business Education Update 2017, provided attendees with updates and information for the Montana Business Education Curriculum Resources Binder and information regarding Montana CTE Funding & Career Pathways, Perkins & Advisory Committees, and Professional Development Opportunities.

During the Fall 2017 semester, Business Education Specialist Eric Swenson provided training and instructional support to the students of the business education teacher preparation program at the University of Montana-Western in Dillon. Some the topics covered included principles and philosophies of career and technical education, business education curriculum development and resources, developing Montana Career 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.

Agriculture Education

The Early Career Professionals Workshop was held in August to meet with teachers who were under five years of teaching. This one-day workshop was held in Bozeman at MSU in collaboration with the Agricultural Education Department, National FFA Staff, and the Montana FFA Advisor. During this workshop teachers had a more direct one on one opportunity to ask questions, receive training on deadlines, reporting systems, and curriculum development. Presenters provided many digital and hard copy resources that would be useful for new teachers. They were helped with CTSO management and membership questions.

Our teachers had their own Professional Development track during the Fall Montana Association of Career and Technical Educators(MACTE) Conference. In this track they received direct instruction on the new Montana Career Pathways, how those pathways were developed, and information on how they tied to our post-secondary programs. They also were given information on free online instructional resources provided by the National FFA Organization. Teachers were also able to tour Highlands College in Butte, Montana, this two-year post-secondary program offers many manufacturing and construction pathways.

During the year, the Agricultural Education Specialist, was a guest presenter at Montana State University (MSU) for our pre-service teachers. Speaking in several classes about Montana Career Pathways, SEID course codes, Perkins and State Vo-ed funding, and expectations of teachers and programs. This is an opportunity to help better prepare our future teachers in the requirements that they will have as an CTE teacher.

The Agricultural Education Summer Update is another collaborative effort for professional development between the Office of Public Instruction, Montana State University, and the Montana Association of Agricultural Educators. This four day workshop was held at Sweet Grass High School in Big Timber, MT. There were teacher led workshops in floral design, veterinary science, agricultural business, communication, leadership, and meat science. Teachers toured a forestry and sawmill operation, learning about the timber industry. They had guest speakers on the fishing and fishing guide industry in the Yellowstone area, they also participated in learning how to make flies and practice casting. They had inquiry based lessons on Natural resources on soils and water quality led by a certified Lab Aides instructor. They were given lab kits to take home with curriculum on water and soil quality. More than half of our instructors attended this summer conference.

Family & Consumer Sciences Education

In August 2017, Family & Consumer Sciences (FCS) Education Specialist Megan Vincent organized and conducted five day-long workshops around the state titled, "What's Great in FCS" in Sidney, Billings, Helena, Bozeman and Missoula. The meet the teachers were they are model works well in our physically large state, and teachers are eager to participate. Topics covered during these updates included Montana FCS & CTE Updates, FCS National Standards 3.0 rollout, FCS Resources, The Science Behind Food & Flavors, and Best Practices.

In October 2017, 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 December 2017, 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 March 2018, 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 FCCLA, finding jobs, CTE & FCS funding and the Say Yes to FCS initiative.

In April 2018, the Family & Consumer Sciences Specialist Megan Vincent, a Montana Financial Education Coalition board member, helped plan and facilitate the bi-annual Montana Financial Education Coalition Statewide Financial Education Coalition and Resource Fair in Bozeman along with presenting a workshop on “Financial Fitness” curriculum for use with middle and high school students. Megan Vincent also presented an OPI Update on current OPI/FCS/CTE updates in Montana for FCS professionals at the annual Montana Association of Family & Consumer Sciences conference.

During the month of June 2018, Family & Consumer Sciences Education Specialist Megan Vincent organized and conducted a five-day professional development conference “Design, Prepare, Connect” 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 class focused on enhancing professional practice, collaborative work time, and course development within the Human Services pathway focus. Topics covered during the week include Montana Career Pathways, curriculum decisions based on the well-being model, program promotion, relationship education, FCCLA national programs, unpacking national standards, lab management, foods & nutrition courses, clothing & textiles, early childhood safety and well-being, career readiness and exploration, financial well-being, teaching financial education, assessment tools, early childhood literacy and special needs, content literacy, vocabulary activities, content resources, growth mindset, readers workshop, and syllabus training. Speakers included the conference organizers as well as university faculty members, FCS professionals, and business/industry experts.

Health Science Education

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

Professional development for health science teachers was offered in conjunction with our HOSA-Future Health Professionals Fall Conference. Starla Ewan, a national trainer on lesson plans in anatomy and physiology, worked with teachers on creative ways to help students understand and internalize body systems and medical terminology. Teachers were also provided with step by step guidance regarding rigorous MT Career Pathways implementation.

The majority of our health science teachers are also HOSA-Future Health Professionals Advisors and they had the opportunity to participate in a series of educational symposiums held at State Leadership Conference and additional professional development was offered at the HOSA International Leadership Conference.

Industrial, Trades, and Technology Education

Industrial trades and Technology Education Specialist Don Michalsky, assisted in planning, attended, advertised, supported, and in some cases helped to facilitate Professional Development Activities at the State SkillsUSA Leadership and Skills Conference in April 2018, where proposed updated changes within the conference were introduced, along with possible upcoming Professional Development activities.

Professional Development Workshops were offered for students and teachers at the state conference, and were scheduled at times that would be the most compatible with the conference schedule.

At the National SkillsUSA Leadership and Skills Conference, Louisville, KY, June 2017, numerous Professional Development opportunities were available including over 60 mini-sessions provided by business and industry. These sessions were made available to teachers, parents, chaperones, as well as students. Some of the newest learning and testing simulators were also available to experience on-site.

June 2018, 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 in June 2018. A second 40-hour Welding Fabrication Workshop was also offered at an alternate time.

This 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 had the opportunity 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. Arrangements must be made for an AWS certified inspector to be available for students to participate in the testing activity at a time when they are confident in a specific welding process.

Great Falls College offered a 30-hour Welding Workshop for teachers. Attendees were able to choose basic to advanced tasks involving certain welding processes and positions on which they felt the need to improve their skills. Class size was limited to 20 participants in order to provide time for one-on-one instruction.

A Hybrid Automotive Training Workshops was offered at the Helena College Airport Campus in June 2017. This opportunity was open to secondary and postsecondary instructors, as well as administration personnel who wanted to learn about Hybrid concepts.

This training could also be considered as expanding CTE technology, as coursework involved new and emerging technology in areas such as practices and procedures involving Hybrid HV Technology.

A three-day Precision Measurement training was again offered and open to teachers and students in the spring of 2018. Industry Certificates were issued to those attendees achieving a minimum score of 90% in each of the five modules.

Various Automotive Training Sessions were also advertised for Montana secondary and postsecondary instructors, sponsored by Portland Community College, Portland, Oregon. The training offered covered both Automotive, Hybrid, and Diesel Technology. These training workshops were offered in May and June of 2018, giving instructors an attendance window that is workable.

The Montana Association for Career and Technical Education (Montana ACTE) held an institute in October of 2018 in Billings. The institute, entitled "Say YES to CTE: Educating the Next Generations" focused on education Generation Z. Keynotes and primary sessions focused on the Generation Z and Youth Entrepreneurship. Approximately 172 career and technical educators were served representing FCS, industrial technology, business and marketing, agriculture, career counselors, health sciences and administration.

Postsecondary Response:

City College faculty and staff attended NCLA, NACTEI, Cardiovascular Training for Radiologic Technology, Online Learning Consortium Innovation Conference, Fire Science Training, MT ACTE, and Nursing Webinars.

Flathead Valley Community College supported faculty/staff to attend the Cooperative Education and Internship Association Conference, the National League of Nursing Conference, and the Commission on Adult Basic Education Conference.

Gallatin College offered a Solidworks training for four high school instructors, who participated in a week-long class with Gallatin College faculty and an industry partner. Additionally, Gallatin College provided professional development with Family, Consumer Science instructors on the Gallatin College campus with Culinary Arts faculty. The Interior Design program worked with Great Falls, Billings and Bozeman instructors on their dual enrollment courses specifically, and those instructors brought their students onto Gallatin College campus for a visit.

Great Falls College offered the following professional development to their faculty and staff: Technical Writing for English faculty teaching writing in the trades courses; CIT program director attended Instructional Technology Council Conference; dental faculty attended Dental Hygiene Boot Camp; Pathways coordinator attended National Career Pathways Network conference; Respiratory faculty attended American Association of Respiratory Professionals conference; Medical Assistant program director attended American Association of Medical Assistance conference; Physical Therapy program director attended Physical Therapy Association Combined Sessions Meeting; Perkins and Pathways coordinators attended national Association for Career and Technical Education conference; Physical Therapy faculty attended Rock Tape course; nutrition faculty attended Nutrition and Health Conference; CIT faculty attended robotics equipment training; Perkins coordinator attended National Association for Career and Technical Education Information conference; Dental Hygiene faculty attended American Dental Hygienist Association conference.

Helena College was able to provide professional development for two CTE teachers in diesel technology. Rick Purcell attended NC3 training which enables diesel students to obtain more industry recognized credentials in diesel technology. Derrick Hauer attended a Fluid Power training that enabled him to enhance his Hydraulics curriculum to include updated material for the new hydraulic systems on diesel trucks. In cooperation with Montana Career Pathways, Helena College also provided professional development for high school instructors in the spring of 2018 in the area hybrid technology.

Two faculty members from Highlands college attended national conferences for training to learn about best practices used for improving success of CTE students enrolled in two-year higher education. In addition, one faculty member used 40% Perkins Funds and 60% Testing Fee funds to attend a training conference on how to design and implement the new Accuplacer test for the upcoming year.

In June 2018, Missoula College offered a Welding Tips for Teachers for secondary industrial and agricultural instructors to expand their welding knowledge with the possibility of offering dual credit at their respective high schools. This was a two-day course on GMAW skills and another two-day course on GTAW. There were three participants, two who took both courses and one who only took GTAW. A welding instructor from Darby was one of the participants and the MC SMCP's Director was able to discuss dual credit with him with the outcome that a Welding Dual Enrollment course is planned at Darby High School for the 18-19 Academic Year.

Northwestern Evaluation Association came to the MSU Northern campus before school started to do a full day training on formative assessment. We had 36 faculty members who attended in the morning and 32 who returned after lunch. This event was highly successful and our new instructors in diesel, welding and drafting were very impressed with this training and are asking for more.

Montana Western offers many professional development programs for CTE teachers, faculty, administrators and counselors. Some of the professional development programs are designed and delivered by the campus. Other professional development programs are designed by partners who desire to academic credit.

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

Secondary Response:

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 FCCLA Joins the Workforce, Design Your World, Lead from Behind, Montana Farm to School, Taking Down Tobacco, Just Drive, Community College vs University – the Difference, Talking Trash Food Rescue, FCCLA Recruitment and Promotion, Scholarships, Dance Movement, Engineering Your Story, and Public Speaking. For the third 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 Education Program Specialist, Megan Vincent, weaves throughout all professional development options conversation and awareness of gender neutral programs/classrooms and ways to market the FCS curriculum to both genders to work on increasing male enrollment in the FCS classrooms. Technical assistance was provided to the Montana ProStart Director; this program has a high level of male participation from 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, 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.

The annual TEKNOXPO (techno-expo) conference was held in Havre, April, 2018, 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 offered by 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. Over one-third of the participating students were female.

The activity featured several former MSU-Northern female program graduates, who are currently employed in non-traditional fields. They presented occupational information at this event related to their career field. 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.

WOMEN IN GEAR

In April 2018, Helena College offered the "WOMEN IN GEAR PROGRAM" at the Airport Campus. Young women in grades 8 to adult were able to engage in activities involving Automotive Technology, Aviation Maintenance, Computer-Aided Manufacturing, Construction, Diesel Technology Fire & Rescue, Industrial Welding and Fabrication.

In addition, program speakers are selected from successful women who are employed in careers considered to be non-traditional occupations.

Main sponsors are The Boeing Company, The Montana Contractors Association, the Career Training Institute, and Montana Career Pathways.

Postsecondary Response:

Dawson Community College held a welding competition on their campus for high school students in the state. Both male and female students participated in this event, as well as in an event for agriculture students to learn about technology in the field.

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 conducted a Start Smart workshop to provide students with salary negotiating skills, as well as hosted the CodeGirls Montana club to expose girls to computer programming.

Helena College in collaboration with Boeing Helena held the annual Women in Gear symposium for females interested in the Trades. Helena College also had several collaborative efforts with K-12 partnerships this year that exposed junior high students (both male and female) to the various trade professions including Automotive, Welding, Diesel, Aviation Maintenance, and Computer Aided Manufacturing.

The Highlands College recruiter along with the Montana Career Pathways Director visited area high schools and provided students, teachers and counselors with information about the non-traditional career options available at Highlands College. In addition, area high schools visited Highlands Campus and students were given the opportunity to participate in activities provided by various departments. A new addition to the recruitment efforts that started during the spring semester was automotive faculty began to visit area high schools (teachers, students and guidance counselors) in the effort to explain the new changes in the field of Automotive Technology.

An Industrial Expo was held in April at the Missoula College West Campus for the third year in a row. Approximately 126 juniors and seniors, which included both male and females from 9 different high schools attended and were accompanied by one to two counselors and/or industrial tech instructors from each school. Current students, faculty, and volunteers informed students about the Missoula College Industrial Degree options in Welding Technology, Heavy Equipment Operation, Sustainable Construction, Facility Management Engineer, Diesel Technology, and Precision Machining Technology. The Program Director put together brochures that included all of our industrial degree options as well as relevant workforce information, such as average beginning and median wage in Northwest Montana and what skills students gain in the program, to give to each student. Tours were given of the Missoula College Industrial campus by volunteers and current Industrial students. Students spent 15 minutes with each of our programs faculty and participated in program related hands on activities such as practicing welding in the welding area and hammering nails in the house our Construction students had been working on. Thanks to Reach Higher Montana students were able to offer lunch to the students and the students were able to participate in setting up and learning about scholarship portals. We had representatives from Career Services and Admissions on hand to answer any questions the students had about careers in the fields we offer or about applying to the Missoula College.

MSU-Northern hosted its 10th annual TekNoXpo. This event brings high schooler students from across the state to campus for a one-day hands on event in our technical programs. Females were encouraged to explore welding, automotive, diesel, plumbing, electrical, agriculture mechanics and agriculture technology. Males were encouraged to participate in the nursing section.

SKC's Career Exploration day, supported in part by the MCP grant, exposed both males and females in three CTE areas: Allied Health (Dental Assisting, Nursing, Medical Assisting), Natural Resources (Hydrology, Forestry, Wildlife and Fisheries), and Computer Sciences (Digital Design Technology and Information Technology); males and females were included in all three tracks. Additionally, the Highway Construction Training Program continues to have a specific outreach to females, including an afternoon in which females are encouraged to come to the department, use the training simulators, and speak with program staff.

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

Secondary Response:

The 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.

Industrial Trades and Technology Education

The Industrial Trades and Technology Education Specialist has met with Mr. Spika, and discussed several issues facing employers seeking entry level employees. Some applicants being high school graduates and some who have graduated from a secondary program.

OPI has supported the CTE program and SkillsUSA Chapter at Lewistown High School, the combination of which have contributed to entry level applicants at Spika Design and Manufacturing.

Each September, Spika Design & Manufacturing in Lewistown, MT hosts 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 and allowing for Special Needs of the students.

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 given the chance to experience first-hand, the various stations that were set-up for students. Part of the agenda included a discussion which addressed employment opportunities for Special Population Students in manufacturing.

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.

The Health Care Industry has one of the highest job openings in high skill and high wage occupations in MT. Many of these unfilled job openings are in rural communities. By collaborating with rural Critical Access Hospitals and colleges, the health science education specialist designed year-long internship programs for high school juniors and seniors. In addition to the internship, dual credit coursework is available that will fulfill pre-requisite requirements for students entering health professions programs of study at the post-secondary level. Some locations also offer industry-recognized certifications in Nursing Assisting, Pharmacy Tech, and Emergency Medical Technician.

Postsecondary Response:

City College provided students with information on the Horatio Alger Scholarship, which targets special populations. It also provided support to the online practical nursing program to assist single parents, displaced homemakers and individuals from economically disadvantaged families.

Flathead Valley Community College sent their Adult Education Director to a conference focused on supporting students with learning challenges who are transitioning into postsecondary education.

GFC MSU used Perkins funds for a half-time assistive technology assistant position. This individual assists students with disabilities in using technology to help them with learning, studying, reading, testing, etc. GFC MSU also conducted a Start Smart workshop to provide students with salary negotiating skills.

Many of Helena College's students are economically disadvantaged. The campus also has multiple females in trades program areas, primarily in aviation, computer aided manufacturing, and welding. The Perkins Grant funding was used to support the programs and all of the CTE students in those programs. The addition of the night welding section allowed for high school students to attend at a reduced cost as dual credit is only half tuition for those students. Many of these students are economically disadvantaged and may not think college is an option.

Highlands College provided academic support by offering tutoring to CTE students in degree specific courses for all students enrolled at the college. Also, Highlands College, in collaboration with faculty advisors, provided peer mentoring for students with an emphasis on Perkins special population students. In addition, a student-parent program was developed and implemented to assist single parents with academic support that allowed students to bring their children to campus while they participated in tutoring services on campus.

SKC continues to provide support for individuals with disabilities through a Disabilities Coordinator who provides counseling, works with faculty on recommendations for assistive devices, and monitors retention rates for these students. Since approximately 80% of SKC students are economically disadvantaged, multiple campus services are oriented toward providing services that support students including comprehensive financial literacy programming, loan counseling, emergency loans, assistance with transportation, book loans, and other services.

MSU Northern has Student Support Services (SSS) that provides counseling, tutoring and a lounge for special populations. The tutoring center also provides free tutoring to all students.

Montana Western offers support for all students via its Disability Services Office, Student Support Services Program, Financial Aid Office and Student Learning Center.

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

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 Billings School District CTE Review that was requested by the Superintendent of the Billings School District.

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

During the year Agricultural Specialist is available to program teachers through a variety of ways, one is a Google group, where teachers can pose curriculum and program questions. This is open to all teachers for response, but it also allows the specialist to monitor and assist in programs and areas as teachers need. There are also a series of meetings during the year; eight regional trainings where they can ask direct questions and updates are provided, there is a state-wide winter and spring meetings where the specialist can discuss reminders and upcoming dates and deadlines.

During the year, the Billings Career Center was targeted as a program that needed guidance. After the initial meeting, a plan to change curriculum was put into place. The Curriculum for Agricultural Science Education (CASE) was selected and a three-year implementation plan was put into place. Part of the plan was allowing ninth and tenth grades students into the program. This has led to other programs around the state to look at the CASE curriculum.

The Health Science Education Specialist continued to work with Missoula School district's CTE Taskforce for the school year to re-evaluate high school-workforce collaboration, course offerings, advisory committees, and funding streams for CTE.

CTE State Health Science Education 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.

The Health Science specialist also piloted a hospital-based internship for a rural school that did not have a health science program in the school. Technical assistance extended to the hospital personnel as well as the school staff to fully integrate the learning experience between systems.

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 2017-2018, about 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, Montana Career Pathways, business education and career and technical education curriculum resources, and professional development information and resources.

Industrial Trades and Technology Education

During the reporting time frame, the Industrial Trades and Technology Specialist provides continuous Technical Assistance to individuals and school districts. The demand for Technical Assistance usually increases in the fall due to the increase in Montana Class 4 Career and Technical Educator License applications, and for those people who possess that license, and need to meet criteria to renew their teaching license.

Technical Assistance also intensifies during the period when schools are submitting their Carl Perkins applications. Most questions involve the Budget Pages and allowable purchases using Perkins funds.

Technical Assistance is always part of the format offered during the New CTE Professionals Workshop, which is held each October at rotating locations, and occurs a day prior to the Montana ACTE Institute. Technical Assistance continues during the following days during the Montana ACTE Institute.

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.

Postsecondary Response:

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

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

OCHE hosted 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.

7. Serving individuals in state institutions

Part I: State Correctional Institutions

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

4900

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

79

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

Pine Hills Correctional Institution was able to add several curriculum options that are available online, as well as a number of certification programs. CTE instructors were sent to subject-specific trainings in order to keep curriculum up-to-date and challenging to students. Pine Hills School continues to strive to offer a variety of CTE courses that enhance student's educational opportunities. Dual credit is now being offered through the local community college in welding. Tools were purchased to help the Automotive Mechanics program transition into being an ASE certified program.

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 from institutions serving individuals with disabilities.

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

Secondary Response:

As mentioned above, the FCS Education Specialist offered five day-long FCS Regional Updates in August 2017 as well as a five day FCS Summer Conference with MSU & Montana FCCLA in June 2018. For the ninth 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 2017, 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 2017-2018, about ten teachers were enrolled the program.

Postsecondary Response:

Gallatin College supported a Culinary Arts program. There was a group of high school students and instructors that attended a Pro-Start training session, and nine high school instructors attended basic professional development workshops with Culinary and Hospitality Management faculty.

Nutrition faculty from Great Falls College, Susan Cooper, attended a Food and Nutrition Conference to improve her knowledge and to improve the nutrition course.

Missoula College hosted the ProStart Invitational for the state of Montana, which was attended by over 200 people, including restaurant owners, industrial leaders, and the National Restaurant Association Board of Directors of Montana. The college also hosted 17 ProStart high school teachers for a National Restaurant Association Education Foundation's Summer Institute Level 1 class (held in July 2018 with planning in FY18).

At UM Western, all three of the new dual credit MOUs were developed in collaboration with family and consumer science programs to provide coursework in early childhood education.

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:

This grant year ten campuses were awarded one-year grants in varying amounts between \$37,000 and \$82,000 to pursue a wide variety of activities outlined in the RFP for Montana's Reserve Fund competitive grants. These grants were awarded to Perkins eligible two-year programs, community colleges, and tribal colleges for Strengthening Montana Career Pathways projects. The objective of the Strengthening Montana Career Pathways grant is to grow and further develop the Strengthening Montana Career 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 development and enhancement of Montana Career Pathways that include the following value-added activities for students:

1. Increasing the availability of CTE dual enrollment courses aligned with in high-skill, high-wage and high-demand employment sectors, with particular focus on small, rural, and underserved schools.
2. Increasing the availability of Work-Based Learning Opportunities for MT high school students aligned with in high-skill, high-wage and high-demand employment sectors, with particular focus on small, rural, and underserved schools.
3. Increasing the availability of Industry Recognized Credentials aligned with in high-skill, high-wage and high-demand employment sectors, with particular focus on small, rural, and underserved schools.
4. Supporting campus-hosted skill-building and technical trainings for high school CTE teachers.
5. 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.
6. Supporting career-focused events to connect students, parents, educators and industry in high-skill, high-wage and high-demand employment sectors.
7. Developing Industry Partnership activities.
8. Creating or participating in professional development activities for secondary, postsecondary and/or industry partners.
6. Promoting Montana Career Pathways and pathway awareness.

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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Step 3: Use of Funds: Part C

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

Secondary Response:

During the 2018 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 conducted three (3) one-day regional professional development workshops in July and August 2017 for Montana's secondary business educators. These workshops focused on instructional strategies and resources for teaching financial literacy/personal finance utilizing the Hands on Banking curriculum and for teaching computer science principles using the complete CS Unplugged collection of learning activities. Additionally, participants began the journey to earn Cyber Teacher Certification via LifeJourney's National Security Administration Day of Cyber. The workshops were held in Kalispell (July 31), Billings (August 2), and Helena (August 4).

As mentioned above, the FCS Education Specialist offered a five day-long FCS Regional Updates in August of 2017. These updates included a workshop on integrating science academic activities into foods and nutrition and culinary arts. In June 2018, during the OPI/MSU Summer FCS week-long class, literacy strategies were woven throughout the content daily purposefully showing a intentional and high level of English/language arts integration into the FCS curriculum.

Eight high schools in Montana adopted Project Lead the Way Biomedical Science curriculum that embeds Next Gen Science Standards (NGSS), medical math, topic-specific reading, and scientific journaling into the curriculum. All health science programs are highly encouraged to offer anatomy & physiology and medical terminology as part of the career pathway.

Postsecondary Response:

City College provided tutoring to CTE students in technical math, chemistry, anatomy and physiology.

FVCC hired an adjunct instructor to teach ECP 104, Workplace Safety, a class required for all Occupational Trades programs except firearms (Electrical Technology, Electronics Technician, Industrial Machine Technology, Industrial Maintenance, Nondestructive Testing, HVAC, Heavy Equipment Operator, Welding and Fabrication Technology, Welding and Inspection Technology). The class provided program-specific safety training, general first aid, and 10-hour general industry OSHA training. Twenty-two CTE students completed this course. FVCC's Phlebotomy course instructor redesigned the course into two, rather than one, semesters, separating the lecture portion of the course into the first semester and the clinical portion into the second semester. The course enrollment can now support 25, rather than 10, students. In addition, the course now meets accreditation requirements for students in FVCC's Medical Lab Technology program.

Gallatin College provided all of their CAS and AAS programs with professional communication, interpersonal communication, and the appropriate

English faculty at Great Falls College received professional development in Technical Writing to assist them in teaching writing in technical programs. The college also embedded tutors in these courses to better assist students who need additional help.

Perkins funding supported a tutor for technical mathematics at Helena College. The completion rate of students in those courses increased. Funding was also used to support the areas of welding technology, nursing, and pre-pharmacy, by providing instructors/simulator technicians in those areas.

Highlands College provided individualized tutoring services for specific CTE programs. For instance, 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. In addition, changes in the math requirements for students enrolled in the Health Programs are now required to complete a Math for Healthcare course instead of College Algebra. This change in curriculum provides students to experience math content that is relevant to their careers.

Missoula College Business Technology Department had an analysis conducted of their programs, which included focus groups of college faculty and high school instructors, former and current students, advisory board members and business leaders. One of the findings was the need to integrate soft skills training with the internship course. The Applied Arts and Sciences Communications Studies Program offers a COMX 102 course on Interpersonal Skills in the Workplace, which was created by Kim Reiser. Cheryl Gallipeau, Business Technology Department Chair and Lisa Swallow, Accounting Technology Program Director approached Kim about the possibility of combining the Internship course with the COMX 102 course. The three of them spent Spring Semester 2018 to create this collaborative effort, which is being piloted Fall Semester 2018.

All SKC CTE programs include a relevant core of academic knowledge that focuses on SKC's "4 Cs": Communication, Critical Thinking, Citizenship, and Cultural Understanding. These competencies are built into one-year Certificate of Completion programs as embedded content. Specific learning outcomes in each program target student achievement of stated competencies in the 4 Cs as well as technical and workplace competencies. In 2017-2018 each one-Year Certificate of Completion program mapped the 4 Cs to their curricula to increase the specificity of outcomes assessment processes; SKC supported this process by providing faculty development days and professional development.

Montana Western's certificate in early childhood education program targets working women who need to obtain a credential to maintain their jobs. The program is specifically designed to meet the target population's needs and to provide extra academic support. It is tricky to deliver extra support because the majority of students in this program are distance students (living and working more than 60 miles from Dillon). Additional supports include enhanced instructor compensation to acknowledge the extra time needed to work with this population, lower enrollment caps to allow for more support, specialized online tutorials, and dedicated administrative staff to assist off-campus, distance students.

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 Montana Career Pathways).
3. Development of events for students and parents through participation with industry.
4. State and national conference attendance and participation.

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 Montana Career 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.

In August of 2017 the Team Ag Ed group was re-established. This is a state-wide group of stakeholders for agricultural education, looking at a K-adulthood approach to agricultural education. The group is represented by current teachers, teacher leaders, two- and four- year colleges, MT Department of Agriculture, Department of Livestock, Agricultural Business and Industry leaders, MT FFA Association, MT FFA Foundation, MT FFA Alumni, the National FFA Organization, and the Agricultural Education Specialist. This group continues to grow and provide guidance for our agricultural education programs about what the labor needs are, they work with all stakeholders to make sure that students, parents and communities know what educational and career opportunities are available in agriculture. This group meets twice a year, to help set the goals within our educational programs across the state. These stakeholders help to carry the message to other groups, boards and stakeholders as well.

During the Fall 2017 semester, Business Education Specialist Eric Swenson provided training and instructional support to the students of the business education teacher preparation program at the University of Montana-Western in Dillon. Some the topics covered included principles and philosophies of career and technical education, business education curriculum development and resources, developing Montana Career 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 FY2018, 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 December 2017, 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 March 2018, 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 FCCLA, finding jobs, CTE & FCS funding and the Say Yes to FCS initiative.

The Industrial Trades and Technology Education Specialist coordinated communications and meeting logistics between high school programs with Building Trades Programs and the United Brotherhood of Carpenters, Northwest Regional Council, to host an informational career workshop and an "Open House" at the Apprentice Training Facility, located in Helena, MT.

Schools that were located close to Helena attended the morning session. Schools in outlying areas were scheduled to attend the afternoon session, which allowed them time to travel in the morning.

Speakers included male and female journeymen carpenters, who described most of the occupations that fit under the Carpentry/Construction umbrella. Personal career choices as well as the benefits of working in the Building Trades were presented.

Instructors networked with other instructors and administrators from attending schools, as well as establishing contacts with representatives from the Building Trades areas.

The Industrial Trades and Technology Education Specialist also serves on the Highlands College Manufacturing Advisory Board. The latest topics for discussion and planning included Professional Development activities and training for secondary program instructors.

Health Science programs throughout the state were partnered with local colleges to offer dual credit courses in Medical Terminology and Human Form & Function. Industry partnerships were also developed to allow high school students to access training in industry recognized credential programs including Nursing Assisting, EMT, and Pharmacy Technician.

Postsecondary Response:

Blackfeet Community College partnered with Blackfeet Headstart, Blackfeet Nursing Home, Blackfeet [WA1] TERO, and Blackfeet Fish and Game to offer scholarships and internships to students.

Dawson Community College partnered with high school instructors and local employers to design the high school welding competition on campus. Area employers donated prizes and served as judges, in addition to an independent contractor who is a certified welder. Transco supported a field trip for students to come and learn about internship and career opportunities.

FVCC worked with the Montana Department of Labor and Industry to create a new certificate program for HVAC apprentices.

Once again MSU-Northern hosted TekNoXpo. This event brought together high school students, teachers and counselors with Northern faculty, staff, students and business and industry partners to give a hands-on experience in agriculture technology, agriculture mechanics, automotive, diesel, plumbing, electrical, welding, drafting, civil engineering and nursing programs at Northern. The majority of partnerships with business and industry provides funding to our technical programs at Northern. We have a wide range of partnership with employers across the US: BNSF, GE, Halliburton, Modern Machinery Tractor & Equipment, Kiewit, Wartsila are just a few. These companies provide new state of the art equipment, technology and cash funds to help keep our programs running. They will also come on campus to give guest lectures and labs with what to expect in the workforce.

GFC MSU maintains formal relationships with the local health care industry to provide clinical training for students in most health care programs. All CTE programs have advisory committees made up of industry representatives to advise on curriculum and learning outcomes.

Each technical area at Helena College meets with an advisory board at least once (and usually twice) each year. This year the campus also started to partner with the Department of Labor and the Montana Auto Dealers Association in order to get apprenticeships in place for Helena College automotive students. Boeing Helena is also a very big supporter of Helena College and they provide funding for our Women in Gear event and they also provide scholarships for our trades students.

Each department at Highlands College met with local advisory boards to ensure their curriculum met state academic standards and labor force needs in the community. In addition, department faculty met with area high schools to discuss skills needed by high school students to be successful when they enrolled at Highlands College. In addition, each department attended a College Day Fair at Butte High School.

The Missoula College SMCP's Director, either hosted or participated in three parent nights that included information about dual enrollment opportunities, deadlines, and expectations. Over the three nights, 63 students/parents were in attendance. The Missoula College Apprenticeship Liaison meets weekly with the Missoula Job Service Apprenticeship Specialist to discuss business outreach for potential apprenticeships. The Apprenticeship Liaison had meetings with 20 + different businesses as well as attends Missoula Chamber meetings and is on the State Workforce Apprenticeship Board.

Salish Kootenai College's CTE programs partner with numerous local employers to increase student achievement of CTE skills. Each program has an advisory committee that includes local employers that provide input on industry changes and review curricular trends. Many CTE programs, including education, medical assisting, nursing, dental assisting, digital design technology, information technology, highway construction training, business, and office professions, maintain partnerships that allow students to enter and complete internships or practica as program capstones. As such, local and regional partners include health care entities, school systems, tribal departments, and local businesses.

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.

Using Perkins Reserve funds, MUS issued an RFP for Strengthening Montana Career Pathways. The objective of this grant is to grow and further develop the Montana Career Pathways Program in the State of Montana by providing students with a smooth transition from high school or Adult Education to college and careers. The grant focuses on increasing the value added activities supporting Montana Career Pathways including opportunities for dual enrollment, internships, work-based learning experiences, and industry recognized credentials; career pathway 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 activates for secondary, postsecondary and/or industry partners and promoting Montana Career Pathway awareness. Ten colleges received a total of \$591,016 in awards between \$37,000 and \$82,000.

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 Montana Career 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 Montana Career Pathways had an impressive year. The activities listed below are by no means all inclusive.

Connecting the Classroom to College and Career

TechNoXpo

250 students, 12 industry partners, 20 industry reps. 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.

College for a Day

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

L.I.F.E Event

More than 150 students and their teachers/counselors from across central Montana were able to explore the 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 Montana Career Pathways coordinator about dual credit and pathways opportunities for their students. Basic welding, bending pipe, CPR practice were some of the popular activities.

Trades Expo

This event was extremely successful with students from 5 school districts in attendance. 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.

Training Teachers

Welding Summer Camp for Teachers

This week long 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.

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 MCP and CTE dual enrollment. Annual Perkins and Pathways training for staff was co-held at the event.

Increasing CTE dual enrollment

CTE dual enrollment is starting to make strong gains in the state. CTE dual enrollment has grown extensively. In AY15 only 25% of dual enrollment (by headcount) was in the CTE areas, in AY17 this had grown to 32%. 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, heat care, and manufacturing.

Several CTE dual enrollment programs now include industry recognized credentials including EMT, phlebotomy, CAN, AWS, Serv-Safe, Microsoft and Adobe.

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

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 Montana Career 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. A statewide emphasis on Dual Enrollment opportunities resulted in a 7% growth rate in CTE courses since AY15. 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 Montana Career Pathways.

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.

Health science teachers completed training in health professions occupations and were able to ask college partners and medical professionals specifics regarding therapeutics, diagnostics, health information technology, biotechnology and support services.

Postsecondary Response:

This grant year ten campuses were awarded one-year grants in varying amounts between \$37,000 and \$82,000 to pursue a wide variety of activities outlined in the RFP. These grants were awarded to Perkins eligible two-year programs, community colleges, and tribal colleges for Strengthening Montana Career Pathways projects. The objective of the Strengthening Montana Career Pathways grant is to grow and further develop the Strengthening Montana Career 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 development and enhancement of Montana Career Pathways that include the following value-added activities for students:

1. Increasing the availability of CTE dual enrollment courses aligned with in high-skill, high-wage and high-demand employment sectors, with particular focus on small, rural, and underserved schools.
 2. Increasing the availability of Work-Based Learning Opportunities for MT high school students aligned with in high-skill, high-wage and high-demand employment sectors, with particular focus on small, rural, and underserved schools.
 3. Increasing the availability of Industry Recognized Credentials aligned with in high-skill, high-wage and high-demand employment sectors, with particular focus on small, rural, and underserved schools.
 4. Supporting campus-hosted skill-building and technical trainings for high school CTE teachers.
 5. 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.
 6. Supporting career-focused events to connect students, parents, educators and industry in high-skill, high-wage and high-demand employment sectors.
 7. Developing Industry Partnership activities.
 8. Creating or participating in professional development activates for secondary, postsecondary and/or industry partners.
6. Promoting Montana Career Pathways and pathway awareness.

City College supported the Montana Career Pathways program through their Perkins Local Application. The coordinator met with teachers and staff from the Billings Career Center and the Adult Education Staff from the Billings School District.

Flathead Valley Community College's welding instructor traveled to high schools around the state administering the American Welding Society's National Welding Certificate exam, resulting in 112 high school students earning AWS D1.1 code certification.

Great Falls College utilizes reserve Perkins funding through Montana Career Pathways dual enrollment agreements and course offerings as well as other training opportunities. In academic year 2017-18, GFC MSU served 613 students in 69 different Montana high schools.

Helena College used Montana Career Pathway funds to support a training held by Helena College faculty to area high school instructors in Hybrid Vehicle Technology.

Perkins funds were used at Highlands College 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.

The following new courses were created during the 2017-2018 academic year with the Missoula College Secondary Partners: M 121 College Algebra at Alberton High School, M 162 Applied Calculus with Charlo High School, BIOB 101N Discover Biology with Darby High School, WRIT 121 Introduction to Technical Writing, M 162 Applied Calculus with Florence-Carlton High School, WRIT 101 Introduction to Writing with Stevensville High School, and CHMY 121N Introduction to General Chemistry at Victor High School.

Programs supported by Perkins funds at Salish Kootenai College are working with two area high schools to establish dual enrollment and/or concurrent enrollment coursework that will provide postsecondary CTE training. Specifically, the Medical Assisting and Dental Assisting programs have established or are finalizing agreements to provide training opportunities for high school students.

Montana Western has been able to expand the number of dual credit MOUs with Montana high schools. Having these MOUs in place has contributed to growing enrollments in dual credit offerings.

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

Yes

Secondary Response:

Through Montana Career Pathways and working together with the Office of Commissioner of Higher Education (OCHE) coordinators and Montana Career 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

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.

Secondary Response:

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

In Montana all students who are enrolled in agricultural education are automatically entered into membership of the Montana and National FFA Organization, our Career and Technical Student Organization (CTSO). This is because the FFA is an inter-curricular component to agricultural education. Students learn about leadership and service; through their involvement in the curriculum. The specialist also serves as an ex-officio member to the MT FFA Foundation board, MT FFA Association Board, Montana Association of Agricultural Educators executive committee and the Farm to School Leadership team. Along with the specialists support of CTSO's we also have a State FFA Director who provides leadership and technical assistance to local chapters, and the State FFA Officer team. The State FFA Director is responsible for planning of state convention, district leadership schools, board meetings, and attending the following meetings and conferences; MAAE meetings, MAAE Summer Update, National Association of Supervisors of Agricultural Education (NASAE) meetings, and the National Association of Agriculture Educators (NAAE) meetings, along with the Agricultural Education Specialist.

Business Education Specialist Eric Swenson serves as a member of the Business Professionals of America, Montana Association State Board of Directors and Montana DECA Board of Directors. In this ex-officio role, he provides curriculum, leadership, programming support, and technical assistance to the two CTSOs. In addition, he attends the meetings of the two CTSO Boards with the Montana DECA Board meeting in July 2017 and the Montana BPA Board meeting held in August 2017. Additionally, the Business Education Specialist served as a competitive events judge at the Montana BPA Region 4 Leadership Conference (December 5, 2017), the Region 5 Leadership Conference (December 18, 2017),

the Region 6 Leadership Conference (December 19-20, 2017), and the Region 3 Leadership Conference (January 15, 2018), and as well as the Montana DECA State Career Development Conference (February 11-13, 2018) and the Montana BPA State Leadership Conference (March 11-13, 2018). Furthermore, Business Education Specialist Eric Swenson served as a competitive events judge at the Montana FCCLA State Leadership Conference (March 18-20, 2018) and at the DECA International Career Development Conference in Atlanta, Georgia (April 20-25, 2018). Lastly, Business Education Specialist Eric Swenson assisted with the facilitation of Montana BPA's Fall Leadership Conference (October 8-9, 2017) 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 at Fall Leadership Conference and facilitated competitive events the State Leadership Conference held each spring. Students had the opportunity to learn CPR, phlebotomy, blood pressure and heart dissection from paramedics, RNs, and medical school students who volunteered their time to work with students.

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 support to the State Directors for both organizations, and participates in regular CTSO meetings with Cassie Huntley, Montana State Director for SkillsUSA, and assists Kirk Woosley and Dwight Freeman, State Directors for TSA. Mr. Michalsky was also instrumental in offering professional development opportunities for advisors from each organization, including presentations offered for CTSO State Directors and Advisors from each organization during the Montana ACTE Institute, October, 2017.

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 2017, she provided leadership, coordination and presented at the fourth annual Montana FCCLA Leadership Rally. Megan Vincent represented Montana FCCLA at the national State Advisers Management Meeting in January 2018.

Postsecondary Response:

City College supported internships and apprenticeships to students in automotive, process plant, and computer science programs.

FVCC supported the HVAC Apprentice CTS program, which allows students to take a limited number of credits per semester while working in the field as an HVAC apprentice.

The SIM hospital at Great Falls College was upgraded to better support training students in health care programs, many of which require students to complete educational components by working in healthcare facilities. Being able to prepare in the SIM hospital means the students' clinical experiences are more valuable.

Helena College partnered with the Montana Automotive Dealers Association to promote apprenticeships in automotive dealerships. There are currently two apprentices in Helena-area automotive dealerships due to this partnership.

Highlands College utilized the IT Academy to offer industry recognized certification training to all outside agencies to prepare students for their computer courses when they enter college.

The Missoula College Apprenticeship Liaison created a dedicated website for apprenticeships:
<https://www.mcaprenticeships.org/>

Almost all Salish Kootenai College's CTE programs include a capstone internship or practicum that provides work-based learning to consolidate knowledge and skills as students prepare to enter the workforce. In 2017-2018, Perkins funds were used to support the following programs that include final internships or practica: Emergency Services (40 hour ride-along requirement), Medical Assisting (160 hour practicum requirement in a health care facility), Grants Management (has a 80 hour internship requirement but as this was a new program no students participated in the internship in 2018-2019) and Phlebotomy (has a requirement for a particular number of successful venipunctures).

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?

No

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 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.

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 2018, Business Education Specialist Eric Swenson served as a member of the conference planning committee for the 2019 ACTE Region V Leadership Conference. As a member of the committee, he worked with Bozeman business and industry partners to organize tours and will be responsible for coordinating the offering of graduate-level credit for conference participants. The 2019 ACTE Region V Leadership Conference will be held April 10-13, 2019, in Bozeman.

Starting in 2016 and continuing into 2018, the Industrial Trades and Technology Education Specialist, Don Michalsky, has attended meetings with the Montana Automobile Dealers Association (MTADA). Regional HUBS were formed in cities where a postsecondary institution offered an Automotive Program. Local and area dealerships were encouraged to participate. The goal being to funnel high school students into a postsecondary automotive program, and then, after program completion, gain employment with a member dealership.

The HUB cities where the meetings have taken place are: Havre, Helena, Butte, Miles City, and Billings.

MTADA is also in the planning stages of implementing an apprentice model in each of Hub cities throughout Montana. A rough model of the plan has been created. More details about the actual application are pending.

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

State Response:

Business Education Specialist Eric Swenson presented during the Montana ACTE 2017 Fall Institute (Fairmont Hot Springs; October 19, 2017) on the Secondary Programs of Study as part of the new statewide pathways and the transition from Big Sky Pathways to Montana Career Pathways. The presentation addressed the Secondary Portion of a Montana Career Pathway, their focus on current secondary program instruction, the involvement of Montana & district graduation requirements, the inclusion of work-based learning opportunities, the recognition of the roles and contributions of Career & Technical Student Organizations, and how the Secondary Programs of Study provide Montana labor market and employment data, link to the Montana Department of Labor and the Office of the Commissioner for Higher Education, and the details as to how the new Montana Career Pathways will be reviewed and approved beginning Spring 2018.

Secondary Response:

As previously reported, Business Education Specialist Eric Swenson conducted three (3) one-day regional professional development workshops in July and August 2017 for Montana's secondary business educators. These workshops focused on instructional strategies and resources for teaching financial literacy/personal finance utilizing the Hands on Banking curriculum and for teaching computer science principles using the complete CS Unplugged collection of learning activities. Additionally, participants began the journey to earn Cyber Teacher Certification via LifeJourney's National Security Administration Day of Cyber. The workshops were held in Kalispell (July 31), Billings (August 2), and Helena (August 4).

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 FY2018. 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 Endorsement was introduced to the Board of Public Education to establish Emergency Medical Technician and Fire Services Endorsement. This would allow EMT and Fire services personnel to expand CTE health science/public safety course outreach.

Postsecondary Response:

City College used Perkins funds to support training for a new Ultrasound Technology program that began Fall 2018. Perkins funding was also used to purchase Key Centric software for the Pharmacy technology program.

Dawson Community College developed two courses for online training for new licensed addiction counselor requirements in Montana.

FVCC created two new courses based on unmanned aerial systems and purchased two Phantom drones for students to gain hands-on experience utilizing the technology. It also finished development of a Medical Laboratory Technician (MLT) AAS program, with consulting from an experienced MLT professional. This program has accepted five students and will begin fall semester 2018. FVCC launched a certificate program in Firearms Finishing, which required purchasing gun bluing equipment. And finally, the Health Science Division Chair visited a community college that offers a Mortuary Science program to assess the feasibility of starting a program.

Gallatin College used Perkins funds in the development of the new Photonics program as well as a new Culinary Arts program.

At Great Falls College, Perkins provided salary for a new computer faculty member to support GFC MSU's new programming program. Perkins funds were continued for a nursing faculty salary to support the registered nursing program.

Helena College expanded programming this year by offering a CDL program for credit/non-credit opportunity. The advisory board for the diesel technology program has expressed that students coming out with a CDL are more highly desired in the workforce. Although the program was cost prohibitive for students this year as they did not have time to plan for the expense.

Highlands College used Perkins Funds to improve technical education courses by purchasing a software license agreement for the IT Academy and software license agreement for Immerse to Learn program.

The IT Academy at Highlands College is an online learning program that allows students to learn and earn industry recognized certification in a variety of Microsoft programs. Students that acquire certifications will be able to demonstrate to employers that they have mastered the necessary skills to be proficient in Microsoft Office software. The program was utilized by CTE students enrolled in a microcomputers course and was offered to all CTE students, faculty and staff at Highlands College. There were approximately 175 student accounts created and 120 practice certification tests were administered. This total includes college and high school students. There were 78% of students enrolled in Microsoft Office course on campus that completed the final certification tests. Also, Whitehall High school accessed the account and used the software in their computer course. They had all students sit for the certification test with 14 students earning certification in in at least one Microsoft Office program. The Immerse to Learn program at Highlands College was used by the Metal Fabrication students to help deliver content in the advanced welding courses by providing online instruction with videos and practice tests. The students can also access the material outside of class time.

Sustainable Construction Technology Program at Missoula College curriculum changes included course development for online delivery and also designed for a block scheduling model.

At Salish Kootenai College, Perkins funds were utilized to further develop and support CTE courses and programs in the allied health careers, including phlebotomy, home health aide, EMT, and medical assisting. These allied health programs are experiencing increasing enrollment and are a workforce development priority for the Confederated Salish & Kootenai Tribes. In particular, the phlebotomy course was developed and implemented in spring 2018, the home health aide course was developed and implemented in winter 2018, equipment for the EMT program was purchased for the winter 2018 course, and the medical assisting program which is expanding rapidly received funding to purchase educational supplies required for program accreditation. Perkins funds were also used to implement two new office professions-related CTE programs, Grant Management and Office Administration. Perkins funds provided updated computers and software for these programs allowing students to access current software including Microsoft Suites and Grant Management software.

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

Yes

State Response:

In partnership with the Montana Chamber Foundation and One Montana, the Career and Technical Division of the Montana Office of Public Instruction assisted in bringing master teachers and program-area leaders from Agriculture Education, Business Education, and Family and Consumer Sciences Education to Bozeman for a two-day orientation and training on the entrepreneurship curriculum available from Youth Entrepreneurs. The training was led by staff from Youth Entrepreneurs. The event was the beginning of a multi-year effort to develop cohorts of state-level entrepreneurship educators to assist in future training opportunities and to provide entrepreneurship curricular support and technical assistance at the local level.

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

Yes

Secondary Response:

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 2017-2018, about 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— There is a recruitment and retention program being implemented in Montana, through outside funding sources at this time. This program begins with the Tagged to Teach Ag program, used to target high school juniors and seniors into agricultural education. During FY2018, 13 high school students attended the one-day event held on the campus of Montana State University, where they worked with the Agricultural Education Faculty and staff, preservice college students, and state staff, to learn about becoming a teacher. They were presented two lessons along with the materials to teach these lessons in their home schools. Those who applied to attend MSU this fall, were recognized in a Signing Day ceremony during State FFA Convention. Four of those 13 are currently attending MSU majoring in Agricultural Education.

During the year, we also recognize our first-year teachers and present them with a small token of our appreciation. Teachers are also awarded recognition through their professional association; both of these are done at state wide events in front of all students. The last piece that is implemented is that of Early Career Teacher Development for teachers in their first through fifth year of teaching. They are targeted for the Mentor/Mentee program, pairing up experienced teachers in their area that can help assist them through the year and after. They are also strongly encouraged to attend the New Professional's workshop hosted by OPI during the MACTE Fall Conference.

During the Fall 2017 semester, Business Education Specialist Eric Swenson provided training and instructional support to the students of the business education teacher preparation program at the University of Montana-Western in Dillon. Some the topics covered included principles and philosophies of career and technical education, business education curriculum development and resources, developing Montana Career 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 18, 2017 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 Education Specialist, Don Michalsky, has 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 to transition from industry to teaching.

Also, review, refinement, and technical assistance continues with working with Class 4 Career and Technical Educator License applications.

Postsecondary Response:

At Gallatin College, both the Culinary Arts and Photonics instructors came directly from industry. Perkins funding was used to purchase the equipment that they requested. These faculty purchased this specific equipment because it is utilized in industry and students will gain skills by using the correct equipment. By supporting faculty with relevant equipment purchases it helps retain them because they can teach on safe, updated equipment and don't get frustrated.

GFC MSU used Perkins funds to provide professional development for a number of faculty members, which not only helps them remain current in their fields, but also helps them to be more satisfied with their positions.

Highlands College provided professional development for three faculty members. 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.

Missoula College worked on the Culinary ProStart Project that hosted the ProStart Invitational for the state of Montana, which was attended by over 200 people, including restaurant owners, industrial leaders, and the National Restaurant Association Board of Directors of Montana. They also hosted 17 ProStart high school teachers for a National Restaurant Association Education Foundation's Summer Institute Level 1 class (held in July 2018 with planning in FY18) Missoula College also hosted Welding Tips for Teachers as well as an Information Technology meeting with three employers - Blackfoot, Univision, and DataSmart - to provide an overview of apprenticeship model.

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

No