SOUTH DAKOTA ENERGY CAREER PATHWAYS

Final Evaluation Report - September 2018

Final Evaluation Report

Reporting Period: October 2014 – September 2018

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- Mitchell Technical Institute (MTI) in Mitchell, South Dakota was awarded grants in each of the four rounds of funding from the TAACCCT program. The purpose of the Round 4 grant was to enhance and expand energy and utilities programs to address increased workforce demand for highly skilled technicians. The grant project was entitled, *South Dakota Energy Career Pathways (SDECP).*
- Five programs from MTI were involved in the *SDECP* project. They included Power Line Construction and Management, Electrical Utilities and Substation Technology, Natural Gas Technology, Utilities Technology, and Industrial Maintenance Technology.
- Four core strategies were used to implement the project and address TAACCCT goals. They included: increasing diversity in energy and utility programs, developing multiple career pathways for students, enhancing student support services for increased retention, and increasing institutional capacity for innovative instructional delivery.

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II. Evaluation Design Summary

- Implementation was assessed using a *Level of Implementation Matrix*. The levels of implementation of project activities were determined through interviews with project leaders, student surveys, and reviews of quarterly reports, work plans, and other program documentation.
- Evaluators conducted four site visits to Mitchell Tech during each of the second, third, and fourth years of the project.
- MTI supplied timely and accurate data to evaluators throughout the grant period.

III. Implementation Findings

- Grant funds from TAACCCT supported the evolution of MTI's Center for Student Success, which benefits *SDECP* participants as well as MTI students campus-wide.
- Technology based simulations provided *SDECP* students with realistic experience with current practices and standards within the energy and utilities industries.
- Project leadership for *SDECP* is stable and experienced, resulting in well-documented practices which could be replicated by other technical colleges.

IV. Participant Impact and Outcomes

- During the first three years of the grant period, a total 382 participants were enrolled in an *SDECP* program. Of those participants, 324 (85%) earned certification in one of the *SDECP* programs. About 80% of those certifications were one-year diplomas.
- Actual performance surpassed targeted goals on five of the nine outcome measures each year during the grant period.
- Retention rates for *SDECP* programs exceeded the average retention rate at MTI, which itself increased each year during the grant period.

V. Conclusions

- Efforts to develop a Registered Apprenticeship for the Power Line program were substantial but came with unexpected challenges in getting industry involved in the effort. Further research is needed about other successful models of getting graduates into the workforce, in addition to registered apprenticeships.
- The awards and recognitions MTI received during the grant period are well deserved. Its culture is professional and caring, with high levels of expectation and accountability. The growth in Mitchell Tech's institutional capacity accelerated as a result of multiple rounds of TAACCCT grant funding. Most importantly, the majority of that growth is being sustained.

I. TAACCCT Program/Intervention Description and Activities

Mitchell Technical Institute

Mitchell Technical Institute (MTI) is one of four technical institutes in South Dakota. Its total enrollment during the 2017-18 school year was 1,187. MTI is located in Mitchell, South Dakota, a community of about 15,000 people. MTI recently celebrated its 50th anniversary. More than 18,000 people have graduated from Mitchell Technical Institute during those five decades.

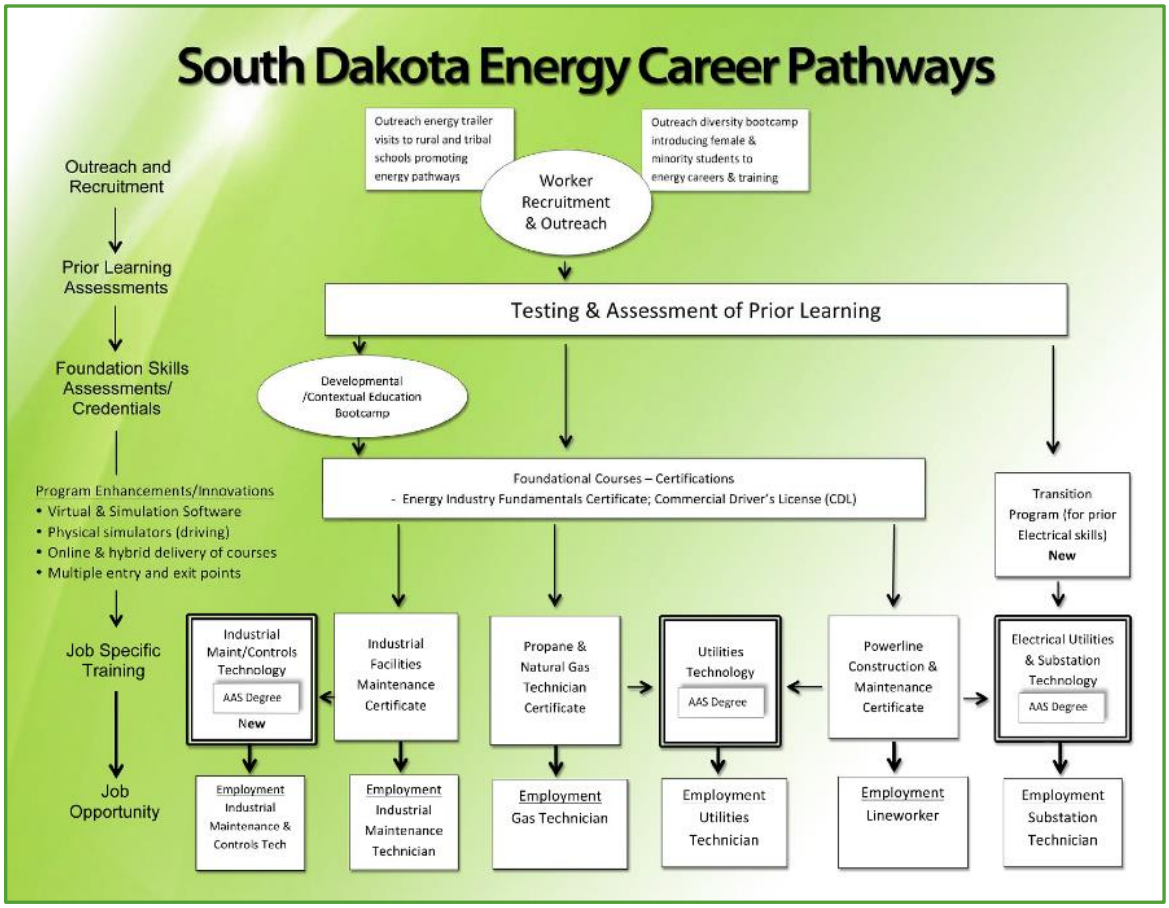
An award-winning technical college, MTI is well known for its innovative programs, industry partnerships, and supportive culture. It is currently one of 10 finalists for the 2019 Aspen Prize for Community College Excellence. The Aspen Prize is the nation's signature recognition of high achievement and performance in America's community colleges.

In August 2018, *The Chronicle of Higher Education* published a report ranking the best completion rates among two-year public institutions for 2016. Mitchell Technical Institute ranked second with an overall completion rate of 69.3%. Also in August 2018, *Forbes* ranked the nation's top 25 trade schools based on high-earning alumni, outstanding graduation and retention rates, and respectable debt repayment scores. Mitchell Technical Institute ranked seventh out of the top 25.

Mitchell Tech was awarded grants in each of the four rounds of funding from the TAACCCT program. Two awards were part of consortium grants and two were individual grants to MTI. Building on successful experiences with TAACCCT grant awards in Rounds 1-3, Mitchell Technical Institute was awarded a Round 4 grant in October 2014. The purpose of the Round 4 grant was to enhance and expand energy and utilities programs to address increased workforce demand for highly skilled technicians. The grant project was entitled, *South Dakota Energy Career Pathways (SDECP).*

Program Design

The design of *SDECP* was based on the Center for Energy Workforce Development's *Get Into Energy* career pathways model. The model features an outreach and recruitment component, prior learning assessments, foundational skills assessments, curriculum development, program enhancements, and job specific training. As shown in the graphic below, *SDECP* connects progressive levels of education, training, credentials, and supportive services for specific occupations within the energy and utilities sectors.



The model focuses on increasing the number of certified workers, creating innovative delivery systems, and ensuring gainful employment for graduates. Each of these efforts directly aligns with the three overall goals of the TAACCCT program.

Five Target Programs

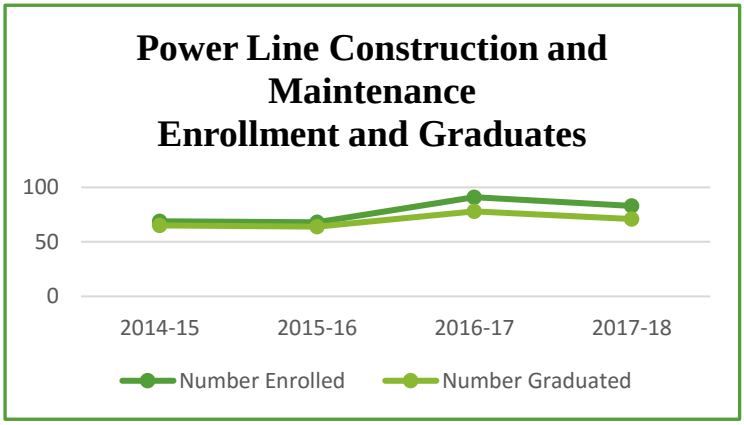
Five programs at MTI were involved in the *SDECP* effort. A short description of each program is included below.

Power Line Construction and Maintenance

A flagship program at Mitchell Tech since 1974, The Power Line Construction and Maintenance (PL) program trains students on the distribution and transmission of electrical power. Job tasks include installing and maintaining power lines, operating a digger derrick truck, setting and climbing poles, and installing transformers. Career opportunities include apprentice lineman, distribution engineer, and utility assistant. PL results in a one-year diploma as well as a Qualified Climber Certificate, a Pole-Top Rescue Certificate, SD Flaggers certification, and a Commercial Driver's License (CDL).

In February 2018, the Power Line Construction and Maintenance program was selected as a Siemens-Aspen Community College STEM Award winner. The program is just one of eight to be recognized across the nation. Approximately half of the $50,000 award is being invested in further program development and the other half is being offered as scholarships to PL students.

The number of students enrolled in the PL program over the duration of the project and the number of completers each year (including May 2018 graduates) are shown at right. An intense nine-month program emphasizing safety first, PL draws students from families which include generations of lineman.



Natural Gas Technology

Due to declining enrollment and changes in industry, significant revisions were made to the Propane and Natural Gas Technology (PNG) program during the grant period. A redesigned Natural Gas Technology (NGT) program was launched at the beginning of the 2017-18 school year. As a one-year diploma program, NGT focuses on skills needed to install, maintain, operate, and repair gas distribution systems and equipment for residential, commercial, and industrial customers. Career opportunities for graduates include: service technician, project manager, fitter fuser, and pipe layer.

Hiring a qualified instructor for the renewed NGT program proved to be a significant challenge for MTI. The open position was advertised online and in print ads but few qualified applications were received. Finally, a past graduate of Mitchell Tech's former PNG program was hired to fill the instructor position and began work in July 2017. The program then faced another hurdle when the instructor resigned just four months later.

Subsequently, short-term arrangements were made with the owner of a local natural gas company to teach the NGT courses for the remainder of the Fall 2017 semester. The owner has industry experience and had previously taught the PNG program at Mitchell Tech during the 1990s.

Discussions were then held to determine delivery options for the Spring 2018 semester for the two students enrolled in the NGT program. A curriculum was designed which included ten weeks of in-class instruction, taught on-campus by local industry experts. An eight- week internship in the local natural gas industry was to follow. Although arrangements were made for internship placements, neither student completed their internship requirements nor the NGT program. They were given an incomplete at the end of the semester and neither has fulfilled program requirements to date.

A search for an on-campus Natural Gas Technology instructor continued through the spring of 2018. It was determined this position would also support MTI's Heating and Cooling Program.

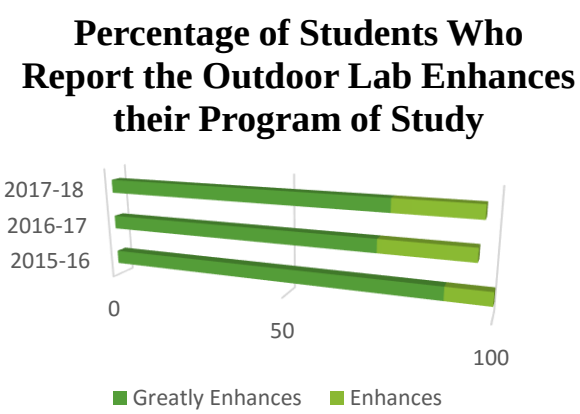
A highly qualified MTI graduate was hired. Based on the experiences with a modified curriculum in 2017-18, a decision was made to return to a more traditional nine-month course curriculum. It was clear that NGT students needed additional skills and knowledge to be successful with an internship placement. The current goal for program graduates is to gain employment as a gas apprentice after graduation or to continue their education at MTI in one of the Utilities Technology AAS degree options.

Electrical Utilities and Substation Technology

The Round 4 grant from TAACCCT breathed new life into the Electrical Utilities and Substation Technology (EUST) program at MTI**.** Originally started in 2010, the program was bolstered by grant funds, industry partnerships, and a new instructor.

An on-campus substation and transmission site is a key resource for the EUST and PL programs. Students not only use the "outdoor lab" for realistic simulations, they gain additional experience by continuing to construct and expand the lab.

EUST graduates earn an AAS degree when EUST is stacked upon successful completion of the Power Line program or prior industry experience/training. As shown below, students value the outdoor lab almost universally.



Utilities Technology

The Utilities Technology (UT) program provides a unique opportunity for students to earn an AAS degree by combining two, one-year energy programs. Students can "stack" any two of the following programs in any order to receive an AAS degree in Utilities Technology.

- Power Line Construction and Maintenance
- Natural Gas Technology
- Heating & Cooling Technology
- GPS/GIS Mapping Technology

Depending on which of the programs are combined, UT graduates find employment as service technicians, apprentice line technicians, apprentice line workers, gas technicians, sales persons, and HVAC service technicians.

Industrial Maintenance Technology

Originally designed as a unique, one-year program to meet the needs of the business community in Yankton, South Dakota (80 miles from Mitchell), the Industrial Maintenance Technology (IMT) program develops knowledge and skills among students so they are prepared to maintain the operation of commercial facilities like plants, factories, and hospitals. Career opportunities include maintenance technician, process technician, building maintenance mechanic, maintenance mechanic, equipment technician, and facilities technician.

Early in the grant period (2015), IMT was expanded from a one-year program to a two-year AAS program. The first year of the program continued to be delivered off-campus in Yankton and the second year was offered on-campus at Mitchell Tech. Two students completed the program and earned AAS degrees in Industrial Maintenance Technology in May 2016.

The IMT program was discontinued in the summer of 2016 due to low enrollment and the realization that much of the second year curriculum was available through other programs at MTI. It was ultimately determined that Industrial Maintenance Technology was not cost effective as a stand-alone program.

GPS/GIS Mapping Technology

As an extension of its TAACCCT Round 2 grant effort, MTI also developed a one-year program focused on digital mapping technologies. The GPS/GIS Mapping Technology program was launched in 2016-17 school year and includes courses in computers, global positioning systems, data collection, computer-aided drafting, and geographic information systems. Graduates are employed as technicians focused on GPS, survey, and other mapping applications. Students in this program may combine it with another one-year program in order to earn an AAS degree in Utilities Technology.

Four Core Strategies

In order to meet the three goals of the TAACCCT grant program, Mitchell Tech invested in four main strategies to implement the *SDECP* program. They are listed below along with brief highlights about their implementation.

Increase the number and diversity of project participants through marketing, recruiting, and outreach efforts.

Develop and deliver an industry-endorsed Energy Careers Pathway Model that provides multiple entry and exit points and stackable credentials for Energy and Utility programs.

Expand and enhance MTI's capacity for student retention and student services to support a diverse student population.

Expand and enhance MTI's capacity for program improvement and innovative instructional delivery.

1. **Increase the number and diversity of project participants through marketing, recruiting, and outreach efforts.**

By providing realistic descriptions of today's energy and utility careers, conducting outreach activities, and employing new marketing methods, MTI is creatively addressing this strategy. Driving simulators acquired with grant funds are portable and used for both training and outreach. Tailored recruiting, outreach, and retention activities are employed to increase diversity at MTI, under the direction of a grant-funded Diversity Coach.

2. **Develop and deliver an industry-endorsed Energy Careers Pathway Model that provides multiple entry and exit points and stackable credentials for Energy and Utility programs.**

Pathways within the energy and utility programs at MTI were expanded during the grant period. In 2015, the Industrial Maintenance Technology (IMT) program was redesigned as a two-year AAS degree program. A new Natural Gas Technology program was launched in the 2017-18 school year to replace the former Propane and Natural Gas Technologies program. A one-year GPS/GIS Mapping program was started in the 2016-17 school year. Registered apprenticeships have been developed to extend training for Power Line graduates. The apprenticeship results in Journeyman Certification and an AAS degree, if desired.

3. **Expand and enhance MTI's capacity for student retention and student services to support a diverse student population.**

The current Center for Student Success at MTI is a result of expanded services and staff, made possible by multiple rounds of TAACCCT funds and efforts. Building on a Student Success Toolkit developed in Round 1 by another member of the grant consortium, MTI continued to expand its support services with Round 4 grant funds. Center staff now includes a Dean of Student Success and three Success Coaches, one of which also serves as a Diversity Coach. A campus Diversity Club was also started during the Round 4 grant period.

4. **Expand and enhance MTI's capacity for program improvement and innovative instructional delivery.**

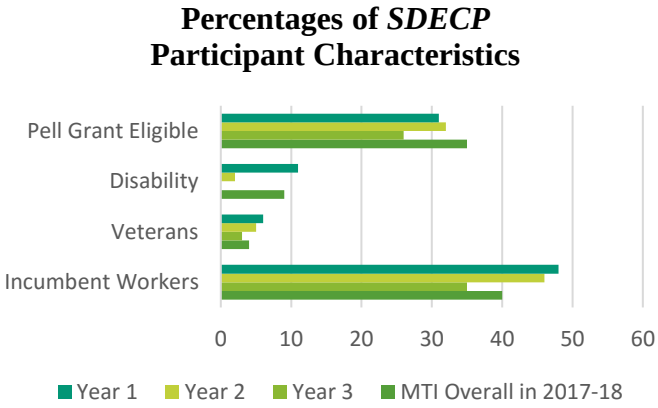
MTI collaborated with industry to acquire the best equipment and training simulators to enhance the effectiveness and safety of *SDECP* programs. A unique resource was also developed with industry support in the form of an on-campus substation and transmission grid, created and maintained by students. MTI revised its policy and procedures for providing credits for prior learning. Professional support for faculty increased with the creation of the Center for Instructional Excellence (CIE). The CIE provides online support as well as on-campus training.

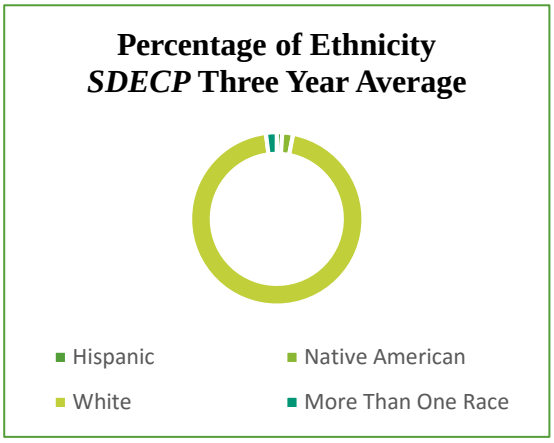
Participants

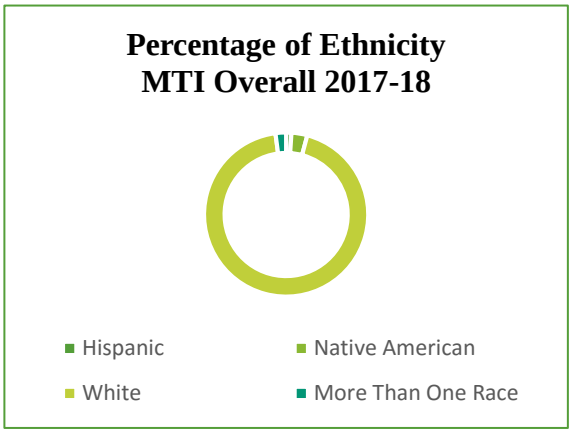
As shown on the table below, *SDECP* participants were predominately white males, enrolled full time, with an average age of 21. Although no TAA-eligible students were served during the project, close to one-third of participants were eligible for Pell grants. As well, an estimated 60% were employed during the time of their enrollment. It is important to note that the year 1 numbers include two cohorts of participants because of TAACCCT participant definitions and timelines for reporting.

***SDECP* Participant Profile**				
Category	**Year 1**	**Year 2**	**Year 3**	**Total**
Male	194	95	91	380
Female	1	1	0	2
Hispanic/Latino	2	2	0	4
American Indian or Alaskan Native	4	2	0	6
Asian	0	2	0	2
Black or African American	0	1	0	1
Native Hawaiian /Pacific Islander	0	0	0	0
White	185	88	87	360
More Than One Race	3	1	4	8
Full-Time Status	195	96	91	382
Part-Time Status	0	0	0	0
Incumbent Workers	93	44	32	169
Eligible Veterans	12	5	3	20
Participant Age (mean)	21	20	20	61
Persons with a Disability	22	2	0	24
Pell-grant eligible	61	31	24	116
TAA-eligible	0	0	0	0

The charts below show that the characteristics of *SDECP* participants are generally congruent with the total student population at Mitchell Technical Institute. One exception to this finding is gender, as the student population at MTI is about 34% female but female enrollment in *SDECP* programs is less than one percent. As well, although 100% of *SDECP* participants were enrolled full-time, about a quarter of students at MTI attend on a part-time basis.







II. Evaluation Design Summary

The main goal of this third-party evaluation was to collect information from a variety of sources to inform adjustments to the program and to estimate its overall effectiveness. This goal was addressed by conducting an implementation analysis as well as an analysis of program impact in the form of participant outcomes.

Mitchell Technical Institute hired the BC Kuhn evaluation team in 2014 to conduct the evaluation of the *SDECP* project. BC Kuhn conducted the evaluation until March 2016. TIE, Technology and Innovation in Education, was then hired in April 2016 to complete the *SDECP* evaluation. An evaluation report was drafted by BC Kuhn in February 2016 and TIE utilized that report as a resource in conducting the evaluation.

Evaluations of TAACCCT grants are required to address research questions included in the SGA. Required questions for the implementation analysis focus on curriculum design and delivery, student recruitment and prior learning assessment, and partnerships. Questions driving the outcomes analysis were identified by MTI and included in the detailed evaluation plan. A table of the research questions focusing the evaluation is included in **Appendix A.**

Implementation Analysis

The implementation study focused on *SDECP's* four core strategies by assessing the implementation of 14 different activities and five deliverables. Implementation was assessed using the *Level of Implementation Matrix,* shown below. Implementation levels were determined through interviews with project leaders, student surveys, and reviews of quarterly reports, work plans, and other program documentation.

Level of Implementation Matrix	
Early Planning	*SDECP* has made some progress in planning the implementation of the activity. Written plans are in the draft stages.
Full Planning	*SDECP* has a final written plan of how the activity will be structured (including logistical details).
Partial Implementation	Some activities are in the full planning stage, while others are in the early implementation stage.
Early Implementation	The activity has begun implementation on a pilot basis.
Moderate Implementation	The activity is occurring regularly.
Full Implementation	All activities have been implemented and are occurring regularly.
Institutionalized	The activity has become adopted by MTI and will continue after funding ends.

Outcomes/Impact Analysis

The outcomes-only analysis describes *SDECP's* performance on TAACCCT's required outcome measures. Actual numbers for each outcome measure are compared to target goals identified in the original grant application.

The initial evaluator of *SDECP* (BC Kuhn) also included the use of a *static-group comparison design* to compare retention and employment rates between students in the *SDECP* programs to students in non-*SDECP* programs at MTI, to the MTI student body as a whole, and to students enrolled in South Dakota's technical institutes as a whole. These comparisons are included in the overall analysis of participant outcomes.

Participant data for annual reporting was collected with Jenzebar, MTI's student information system. Data for tracking employment and wage increases was supplied to MTI by its public workforce partner, the South Dakota Department of Labor and Regulation. This data is typically reported six months after it is collected. This data is only available for those graduates working in SD and does not include self-employed individuals. The South Dakota Department of Education produces a placement report for the state's technical institutes each year. The placement report is based on self-reported data from students who are surveyed approximately six months after graduation.

Capacity Building

Interviews with administrators and project leaders provided valuable anecdotes and details about how MTI's capacity was expanding during each round of grant funding from TAACCCT. Documentation of the reorganization of the Center for Student Success shows how the development of expanded services and increased staffing had a large impact on student retention and support. MTI's average retention rate for all programs increased each year during the grant period. This documentation is one of the five grant deliverables reviewed and submitted to *Skills Commons* for dissemination.

A Diversity Coach position, put in place with Round 4 grant funds, is being sustained as a full time position within the Center for Student Success. The duties of a Round 3 grant-funded position of Retention Coordinator were assumed by the MTI Dean of Student Success. Staff positions established during earlier TAACCCT grants were also sustained beyond the grant periods. These positions include instructional designer, instructional strategist, simulation tech, and curriculum coordinator. They continue to support Mitchell Tech's programs and innovative instructional delivery.

Technology infrastructure upgrades and increased numbers of technology simulations show evidence of increased capacity to deliver and manage a highly technical, digital learning environment. The Center for Instructional Excellence (CIE), launched with Round 4 funds, continues to support MTI faculty with professional learning and consultation. The CIE organized a full week of professional development for faculty at the end of the 2017-18 school year and maintains a database of services provided.

Data Collection

In addition to reviewing the data collected and reported by the initial evaluator, evaluators from TIE used a variety of data collection methods as described below.

Surveys: Student surveys were administered each year, 2015-2018. Instructor surveys were administered in 2015 and 2016. Survey instruments are included in **Appendix B.**

Interviews: Instructors involved in the grant were interviewed in 2016 and again in 2018. Administrators at MTI were interviewed in 2018. Student focus groups were conducted in April 2018. Interview instruments are included in **Appendix C.**

Site Visits: Site visits were conducted during the project for various purposes. Evaluators attended advisory board meetings, a job fair, a statewide meeting regarding apprenticeships, and periodic meetings with project leaders. A schedule of site visits is listed below. An example of a site visit agenda is included in **Appendix D**.

- 2016: April, July, November, December
- 2017: April, August, October, November
- 2018: February, April, May, August

Documentation: Evaluators reviewed MTI's quarterly and annual reports submitted to the TAACCCT program. Project leaders shared the reports on a regular basis via email and *Dropbox*. Grant deliverables were examined as well as the corresponding Subject Matter Expert reviews. Meeting minutes and campus press releases were also used as sources of information about grant efforts at MTI.

III. Implementation Findings

Curriculum Design and Delivery

How were the PL diploma, PNG diploma, IMT diploma, EUST AAS degree, UT-HCT AAS degree, and UT-PL degree curriculums revised and to what extent were the changes implemented? How were the revised curriculums improved or expanded?
How were the new curriculums for the EUST transition program for prior electrical skills and the IMT (Maintenance & Controls) AAS degree developed and to what extent were they implemented? How were the curriculums improved or expanded? Did *SDECP* redesign the curriculum for developmental classes in English and math? How was the curriculum improved or expanded? What delivery methods were offered (i.e. distance education or traditional classroom)? How did *SDECP* incorporate innovative instructional technologies into the program (e.g., simulations, simulators)?

Additional career pathways were created during the grant period. The GIS/GPS Technology program first started as a course as part MTI's Round 2 TAACCCT grant in 2015. Currently a one-year diploma program, GIS/GPS Technology is positioned as an added pathway within *SDECP*. The program also supports additional fields of study available at Mitchell Tech. Students earning AAS degrees in Electrical Construction and Maintenance (ECM) or Wind Turbine Technology (WTT) can also pursue a third-year diploma by completing the EUST program.

A significant curricular redesign of the former Propane and Natural Gas Technologies (PNG) program occurred during the grant period. Changes in industry and waning employment opportunities for propane workers caused MTI to suspend the PNG program during the second year of the grant. A year of study and curriculum development, with input from industry advisors and student feedback, resulted in the launch of the Natural Gas Technology (NGT) program in the fall of 2017.

An electrical substation, referred to as the "outdoor lab", includes both overhead and underground transmission lines. It has fast become the centerpiece for all *SDECP* programs. Textbooks for the EUST program were replaced with online simulations resulting in instructional practices which are better aligned with today's digital learners.

In collaboration with the U.S. Department of Labor, PL instructors created a Registered Apprenticeship (RA) program during the summer of 2016. The RA program is designed to offer graduates a pathway, via online coursework and work experience, to Journeyman certification and higher wages. Completers may also earn an AAS degree, if desired.

General education instructors at MTI attend all advisory board meetings to further assess academic skills students need to be successful in college and on the job. Adjustments to the content and delivery of developmental courses in English and Mathematics are made fluidly in response to classroom and workforce expectations. All curricular changes are monitored by MTI's Dean of Academics.

Students in *SDECP* programs are required to complete a Commercial Driver's License (CDL). MTI used grant funds to purchase two driving simulators and a trailer to ensure wider access to the technology. The simulators permit students to experience many things, including safe driving practices during dangerous situations. Surveys administered to CDL students each semester indicate that the majority of students found the simulators to be beneficial. Students reported that the simulators helped most with learning to shift various transmissions. Instructors report that the simulators help students gain proficiency faster and with more confidence, as well as saving wear and tear on the actual trucks.

Student Recruitment and Prior Learning Assessment

What policies and procedures did MTI develop and implement to improve its ability to meet the needs of a diverse student population? Did *SDECP* develop and conduct a marketing campaign to reach a diverse student population? Did *SDECP* conduct outreach activities, facilitate career interest, and promote diversity? Did MTI conduct an in-depth assessment of participants' prior learning and experiences to select them into the grant program? If so, what assessment tools and process were used? Were the assessment results useful in determining the appropriate program and course sequence for participants?

Numerous outreach and marketing efforts continue to recruit and support more diverse students, including non-traditional students. MTI used grant funds to create a "Diversity Coach" position. The first hire for the position left during the second year of the grant. Another person was hired and remains in that position, currently being sustained with MTI funding.

An Eagle Feather ceremony for Native American students was initiated during the first year of the grant and continues currently. All nine Lakota tribes in South Dakota have donated flags which are displayed in Mitchell Tech's Student Center. MTI also sponsors a Diversity Club on

campus, an effort which has proven challenging as many students don't live on campus and have limited free time due to employment.

Recently, a number of Karen refugees from Southeast Asia were settled in Huron, South Dakota, about 40 miles north of Mitchell Tech. A small number of Karen students have recently enrolled at MTI. Some have even been sponsored by industry partners in the area.

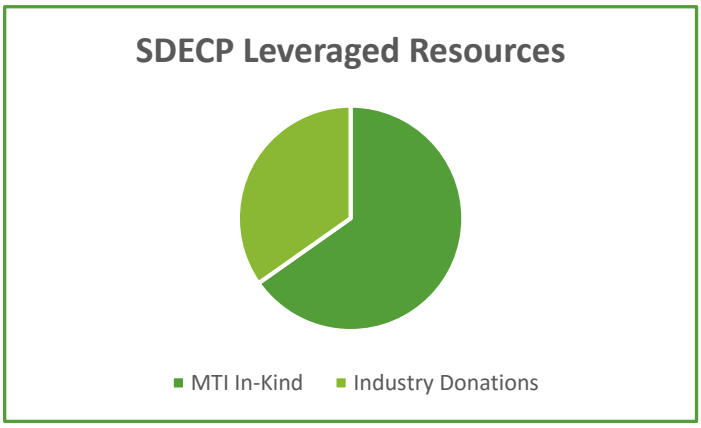
The Center for Student Success currently includes two student success coaches, in addition to the Diversity Coach. The Center is led by the Dean of Student Success and has played a key role in increasing retention rates of students at MTI. A prior learning policy, originally developed as part of a Round 3 TAACCCT grant, is maintained and applied to individual situations to award full or partial credit for a student's prior learning and experience.

Partnerships

What contributions did each of the partners and/or stakeholders provide towards program design, curriculum development, recruitment, training, placement, program management, leveraging of resources, and/or commitment to program sustainability? What factors contributed to partners' involvement or lack of involvement in the program? Which contributions from partners were most critical to the success of the grant program?

Industry contributions were critical in the redesign and delivery of the Natural Gas Technology program. Partners advised MTI on industry needs and current workforce expectations in the Natural Gas industry. Owners of local companies assisted MTI by providing instruction to NGT students when the regular instructor unexpectedly resigned. Continued industry involvement is essential in sustaining the program.

MTI reported the "Leveraged Resources" applied to grant activities on a quarterly basis. Those resources included in-kind support from MTI as well as donations from industry partners. The total amount leveraged during the grant period is recorded as $1,866,781. Over 16 different companies within the energy and utilities industries donated tools, equipment, and materials to the grant programs during the grant period. A list of these donations is included in **Appendix E.** Many partners also donated funds for direct student support in the form of tuition assistance and scholarships. An estimated total of these donations is $649,085. The significance of this industry support for MTI's energy programs is clear as shown in the graph above. It accounts for more than a third of the leveraged resources utilized during the grant period.



For the past 24 years, Mitchell Tech has hosted an annual job fair for its students and industry partners. The event is designed to serve students from all programs at MTI. Beginning in April 2017, an "Energy Job Fair" was held in conjunction with the campus-wide fair, but was conducted separately in the Energy Training Center. This allowed industry representatives greater access to students in the energy and utility fields. MTI supplies students with a list of tips for making the most of the job fair. They are included in **Appendix F.** A total of 28 companies from South Dakota, North Dakota, Nebraska, Minnesota, Wyoming, and Texas participated in the 2018 Energy Job Fair.

Both the Natural Gas Technology and Electrical Utilities and Substation Technology programs are identified as high-need workforce programs. A "Build Dakota" scholarship program is available to students in those programs who agree to work in South Dakota for a period of three years following graduation. In addition, the Workforce Recruitment program at Mitchell Tech

connects students to local companies who pay a portion of the students' tuition and fees. In return, the students agree to work for the company following graduation. MTI also developed a program called "Double Edge" which extends the reach and financial resources made available by Build Dakota and the Workforce Recruitment program. These innovative partnerships save employers time and money finding qualified workers and, at the same time, secure gainful employment for students upon graduation. More information about the Double Edge program is included in **Appendix G.**

MTI partnered with public entities during the grant period as well. In collaboration with the U.S. Department of Labor, a Registered Apprenticeship program was developed in the summer of 2016 and subsequently approved by the South Dakota Board of Education. A detailed description of the Registered Apprenticeship program is available in **Appendix H.** Established during earlier rounds of funding from TAACCCT, Mitchell Tech maintains a partnership with the South Dakota Department of Labor and Regulation to access timely data about the employment and wage status of its graduates.

SDECP Activities and Deliverables

As noted in the Evaluation Design Summary, evaluators used a matrix to assess the level of implementation of grant activities and deliverables. Progress was assessed in February of 2017 for inclusion in the Interim evaluation report and again at the end of the grant period in September 2018. The status of each activity and deliverable are briefly described in the tables which follow.

Level of Implementation Matrix	
Early Planning	*SDECP* has made some progress in planning the implementation of the activity. Written plans are in the draft stages.
Full Planning	*SDECP* has a final written plan of how the activity will be structured (including logistical details).
Partial Implementation	Some activities are in the full planning stage, while others are in the early implementation stage.
Early Implementation	The activity has begun implementation on a pilot basis.
Moderate Implementation	The activity is occurring regularly.
Full Implementation	All activities have been implemented and are occurring regularly.
Institutionalized	The activity has become adopted by MTI and will continue after funding ends.

Strategy 1: Increase the number and diversity of project participants through marketing, recruiting, and outreach efforts.		
Activity	**Status at Interim – February 2017**	**Status at End – March 2018**
Develop and conduct a marketing campaign to include various media and strategies.	Assessed as **Full Implementation**. Brochures, a website, and a TV ad have been developed. Focus is now on the newly developed Gas Technology program.	Assessed as **Institutionalized.** Various marketing and outreach strategies continue to be used each year.
Develop and conduct outreach programs to facilitate career interest, promote student diversity, and student success.	Assessed as **Moderate Implementation**. There was turnover in the Diversity Coach position in year 2. A Career Expo exposed *SDECP* to 1,000 participants. More outreach activities expected.	Assessed as **Institutionalized.** The Center for Student Success continues to serve and support all students at MTI.

Strategy 2: Develop and deliver an industry-endorsed Energy Careers Pathway Model that provides multiple entry and exit points and stackable credentials for Energy and Utility programs.		
Activity	**Status at Interim – February 2017**	**Status at End – March 2018**
Hire project staff/instructors.	Assessed as **Full Implementation**. Diversity coach hired and other grant work contracted with existing staff. A Natural Gas Technology program instructor scheduled to be hired in Spring 2017.	Assessed as **Institutionalized.** The TAACCCT grant director is now the Vice President of MTI. Two grant-funded instructor positions are being sustained with MTI funding.
Assist Black Hills Corporation and CEWD in the creation of the South Dakota Energy Consortium.	Assessed as **Full Implementation**. DEWC is meeting regularly with MTI staff filling key leadership roles.	Assessed as **Institutionalized** with evidence of a three-year strategic plan.
Develop/modify Energy Core curriculum and create Maintenance & Controls AAS curriculum.	Assessed as **Full Implementation**. Industrial Maintenance & Controls AAS program launched in August 2015. Power Line program expanded to 100 students. PNG program being transformed to Gas Technology program with industry input.	Assessed as **Institutionalized** with curriculum modifications ongoing with input from industry.
Implement revised Pathway to Energy Careers curriculum.	Assessed as **Full Implementation**. New GIS mapping program added as second year option to earn an AAS.	Assessed as **Institutionalized** as efforts continue to develop additional pathways, included registered apprenticeships.

Strategy 3: Expand and enhance MTI's capacity for student retention and student services to support a diverse student population.		
Activity	**Status at Interim – February 2017**	**Status at End – March 2018**
Hire grant support staff: Diversity Coordinator/Career Coach, Prior Learning/Credential Coordinator, Instructional Support Specialist, and Technology Specialist.	Assessed as **Full Implementation**. Diversity Coach and Instructional Support Specialist hired. Other positions filled by existing or contracted staff.	Assessed as **Institutionalized.** The positions of Diversity Coach and Instructional Technologist are being sustained with MTI funds.
Develop and implement policies and procedures to provide improved MTI capabilities to meet the needs of a diverse student population.	Assessed as **Moderate Implementation**. Career Coach Handbook being developed. Student Services merged with Student Success Center. Policy development still needed.	Assessed as **Institutionalized.** Documentation of handbooks and policies is in place and described in a White Paper.

Strategy 4: Expand and enhance MTI's capacity for program improvement and innovative instructional delivery.		
Activity	**Status at Interim – February 2017**	**Status at End – March 2018**
Expand network and net-server capacity to provide needed infrastructure to provide education and training and related activities.	Assessed as **Full Implementation**. Network and infrastructure updated. Bandwidth has been increased and LMS (*MyMTI*) is upgraded.	**Assessed as Institutionalized** as the updated and expanded network continues to enable cutting-edge instruction.
Purchase trainers and equipment.	Assessed as **Full Implementation**. All purchases have been made.	**Assessed as Institutionalized** as updated trainers and equipment continue to be used in energy or related MTI programs.
Review, adopt, or adapt simulations, virtual labs, and instructional technology for promoting improved learning outcomes.	Assessed as **Full Implementation**. Simulations have been added to grant programs' curricula. CDL driving simulator being used for instruction and outreach.	**Assessed as Institutionalized** as curriculum development and technology integrations efforts are ongoing.
Create a Professional Development center to prepare and provide on-going professional development training and experiences for faculty.	Assessed as **Full Implementation**. PDC is mostly a virtual resource developed as "Center for Instructional Excellence" and accessed through *MyMTI.*	**Assessed as Institutionalized** as Instructional Technologist and Instructional Strategist positions are maintained to provide professional support in both online and F2F formats.

Revise process for assessment of prior learning and experiences and revise developmental math and English classes.	Assessed as **Full Implementation**. Existing practice was reviewed and guidelines for prior learning developed and available to students on MTI website.	**Assessed as Institutionalized** as policies and procedures were adopted in 2016 and are posted on the MTI website.
Monitor and evaluate MTI's strategies for program improvement and achievement of desired outcomes.	Assessed as **Full Implementation**. Courses reviewed each semester. Advisory boards offer input and feedback. Grant programs evaluated by external evaluators.	**Assessed as Institutionalized** as energy programs conduct annual program reviews for accreditation and improvement purposes.

Deliverable	Status at Interim – February 2017	Status at End – Sept 2018
Marketing findings, materials, and explanation of effectiveness.	Assessed as **Moderate Implementation**. Brochures garnered positive feedback. Online ads being tracked for usage.	Assessed as **Institutionalized.** Marketing efforts continue, informed by lessons and data collected during the grant period.
Documentation of curriculum and credentials.	Assessed as **Moderate Implementation**. Curriculum changes being documented using World-wide Instructional Design System (WIDS).	**Assessed as Institutionalized.** As the only new curriculum developed during the grant period, the Registered Apprenticeship program was reviewed by an SME and submitted to *Skills Commons.*
Documentation of support services procedures and policies.	Assessed as **Moderate Implementation**. Career Coach and Diversity Handbooks being developed. Efforts continue.	**Assessed as Institutionalized.** A White Paper was developed, reviewed, and submitted to *Skills Commons.*
Documentation of Prior Learning Assessment (PLA) Procedures and practices and developmental education curriculum.	Assessed as **Full Implementation**. Prior learning guidelines are posted on the MTI website at https://www.mitchelltech.edu/admissions/admissions-process/credit-for-prior-learning	**Assessed as Institutionalized.** Prior learning guidelines are posted on the MTI website. A White Paper was developed, reviewed, and submitted to *Skills Commons.*
Published Interim and Final report.	Assessed as **Moderate Implementation**. Interim report submitted. Evaluation efforts continue.	**Assessed as Full Implementation.** Both reports have been submitted to DOL and *Skills Commons.*

Findings

1. All 14 *SDECP* activities were completed during the grant period and have been institutionalized as ongoing efforts at Mitchell Technical Institute.

2. Documentation is in place to verify that all five deliverables of the project have been completed. Subject Matter Reviews have also been completed for the applicable deliverables.

3. Grant funds were used strategically to enhance *SDECP* programs with equipment and tools as well as curricular and technology resources.

4. *SDECP* participants report that their instructors are the key to success in the program, followed closely by the outdoor lab and other program resources.

5. Technology based simulations provided *SDECP* students with realistic experience with current practices and standards within the energy and utilities industries.

6. MTI's partnerships with industry are critical to the effectiveness of *SDECP* programs. These partnerships assist with hiring instructors, acquiring materials and equipment, determining curriculum changes, and employing MTI graduates.

7. Grant funds from TAACCCT supported the evolution of MTI's Center for Student Success, which benefits *SDECP* participants as well as MTI students campus-wide.

8. Project leadership for *SDECP* is stable and experienced, resulting in well-documented practices which could be replicated by other technical colleges.

IV. Participant Impacts & Outcomes

The annual performance for each required outcome measure is shown in the table below. Actual performance for each year is compared to outcome targets set at the beginning of the project. Yellow highlights indicate those measures which exceeded their target goal. MTI surpassed targets on five of nine outcome measures for all three years and attained 90% or higher results on all measures. Projected data for applicable Year 4 outcomes is included in **Appendix I.**

Participant Outcomes	Year 1 Target	Year 1 Actual	Year 2 Target	Year 2 Actual	Year 3 Target	Year 3 Actual
1. Unique Participants Served/Enrollees	210*	195	98	96	96	91
2. Total Number of Participants Who Have Completed a Grant-Funded Program of Study	102	106	81	83	69	84
2a. Total Number of Grant-Funded Program of Study Completers Who Are Incumbent Workers		56		35		36
3. Total Number Still Retained in Their Programs of Study (or Other Grant-Funded Programs)	118	87	96	93	93	90
4. Total Number Retained in Other Education Program(s)		0		0		0
5. Total Number of Credit Hours Completed		1541		2834		2917
5a. Total Number of Students Completing Credit Hours	92	112	83	91	83	93
6. Total Number of Earned Credentials		158		313		330
6a. Total Number of Students Earning Certificates - Less Than One Year	102	99	81	86	69	79
6b. Total Number of Students Earning Certificates - More Than One Year		0		0		0
6c. Total Number of Students Earning Degrees		22		17		21
7. Total Number Pursuing Further Education After Program of Study Completion	10	21	10	16	10	12
8. Total Number Employed After Program of Study Completion	32	35	30	46	30	59
9. Total Number Retained in Employment After Program of Study Completion	0	0	31	19	29	34
10. Total Number of Those Employed at Enrollment Who Receive a Wage Increase Post-Enrollment	48	36	46	48	46	37

*Includes students enrolled at the time of the grant award in October 2014 who returned for Spring semester 2015, as they met the TAACCCT definition of "participant". The number also includes newly enrolled students in August 2015 as the cutoff for year 1 reporting was September 30, 2015. In effect, two cohorts of students were counted as participants in year 1.

Static-Comparison Design

A static-comparison design was included in the original evaluation plan for *SDECP* as an additional method for estimating the impact of the project. The design called for "comparing retention and employment outcomes of *SDECP* participants with non-*SDECP* students, MTI students as a whole, and SD Technical Institute students as a whole".

The tables below shows **retention and employment rates** for those groups using available data from the three years of the project. Retention rates in the five *SDECP* programs, as defined as the percentage of students graduated or retained, are exceeding MTI's average retention rate as well as the rate for SD technical institutes as a whole. The average retention rate for all programs at MTI increased during each year of the grant period. Employment rates for graduates of *SDECP* programs are closely aligned with the average employment rates for all MTI graduates as well as those from the four technical institutes in South Dakota.

Retention Rates of *SDECP* Program Graduates at Mitchell Technical Institute			
Students	**2014-15**	**2015-16**	**2016-17**
Power Line Construction and Maintenance (PL)	96%	98%	88%
Propane and Natural Gas Technologies (NGT)	91%	93%	N/A
Electrical Utilities and Substation Technology (EUST)	89%	100%	100%
Utilities Technology (UT)	100%	82%	100%
Industrial Maintenance Technology (IMT)	75%	86%	100%
SDECP Students Average	93%	95%	92%
Non-*SDECP* Students Average	78%	79%	77%
Mitchell Technical Institute Average (all programs)	80%	81%	84%
South Dakota Technical Institutes Average (all programs)	77%	77%	78%

Source: South Dakota Department of Education; Mitchell Technical Institute student management system (Marla Smith, analyst)

Employment Rates of *SDECP* Program Graduates at Mitchell Technical Institute			
Students	**2014-15**	**2015-16**	**2016-17**
Power Line Construction and Maintenance (PL)	100%	97%	90%
Propane and Natural Gas Technologies (NGT)	100%	100%	N/A
Electrical Utilities and Substation Technology (EUST)	100%	100%	100%
Utilities Technology (UT)	92%	100%	100%
Industrial Maintenance Technology (IMT)	100%	100%	100%
SDECP Students Average	98%	98%	98%
Non-*SDECP* Students Average	99%	99%	99%
Mitchell Technical Institute Average (all programs)	99%	99%	99%
South Dakota Technical Institutes Average (all programs)	99%	98%	97%

Source: South Dakota Department of Education; Mitchell Technical Institute student management system (Marla Smith, analyst)

TAACCCT Goal 1

The first goal of the TAACCCT program challenged grant recipients to ***increase the number of adults earning certificates, degrees, diplomas, and nationally recognized certificates in two years.*** The table below displays the number and percentage of adults earning certifications in the five *SDECP* programs during the *three years prior* (2011-13) to the launch of the project in October 2014. The same data is shown for each of the four years of the project.

Note: Data is shown by the year students ***entered*** the program.

Number of Graduates/Graduation Rates (by year student entered program)							
	2011	2012	2013	2014	2015	2016	2017
Power Line Construction and Maintenance	59 88%	66 93%	71 95%	65 94%	64 94%	78 86%	71 86%
Propane and Natural Gas Technologies	20 80%	18 75%	21 91%	15 88%	11 79%	N/A	0 0%
Electrical Utilities and Substation Technology	13 93%	N/A	9 90%	9 100%	9 100%	12 100%	10 100%
Utilities Technology	14 93%	25 96%	13 100%	14 100%	8 80%	6 100%	0 0%
Industrial Maintenance Technology	3 38%	8 89%	3 60%	7 78%	5 83%	N/A**	N/A**
SDECP Students Total	109 85%	117 90%	117 93%	110 94%	97 91%	96 88%	81* 85%
Mitchell Technical Institute Non-*SDECP* Students	277 70%	310 69%	308 64%	336 60%	341 65%	284* 58%	23* 4%
Mitchell Technical Institute All Students Total	386 74%	427 73%	425 71%	446 66%	438 69%	380* 64%	104* 16%

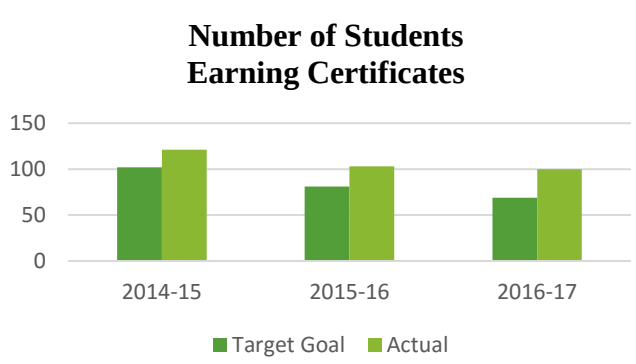
Source: Mitchell Technical Institute student management system (Marla Smith, analyst)

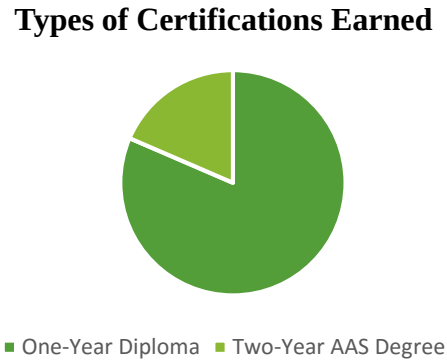
*These rates are incomplete. Most students are in two-year AAS programs and will take at least two years to complete.

**The Industrial Maintenance program was discontinued in the summer of 2016.

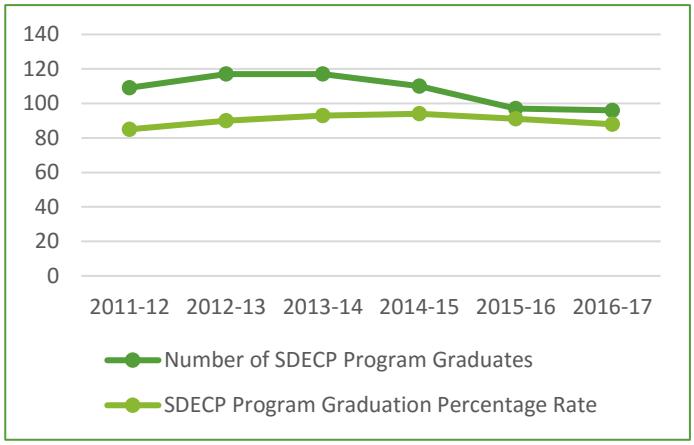
Although the *number* of students earning certification did not increase beyond pre-grant levels, the table and graphs below show that a total of 324 participants earned certifications in an energy or utility program during the grant period, surpassing target goals each year. The majority (81%) of the credentials earned were one-year diplomas. Additionally, many students earned additional certifications as part of their diploma or degree programs, such as Pole-Top Rescue Certificate, SD Flaggers Certificate, Qualified Climber Certificate, and Commercial Driver's License. A total of 801 credentials were earned throughout the project by 324 individual graduates.

Outcome Measure	Year 1	Year 2	Year 3	Total
6. Total Number of Earned Credentials (aggregate)	158	313	330	801
6a. Total Number of Students Earning Certificates - Less Than One Year (aggregate)	99	86	79	264
6c. Total Number of Students Earning Degrees (aggregate)	22	17	21	60





The graph at right shows that the *number* of students earning certification in one of the *SDECP* programs during the grant period (2014-2017) did not increase beyond the numbers earning certification prior to the grant award (2011-2013). However, there was a slight increase in the *graduation rate* during the grant period, as compared to the graduation rate before the grant interventions.



Findings

1. Actual performance surpassed targeted goals on five of the nine outcome measures each year during the grant period.

2. Retention rates for *SDECP* programs exceeded the average retention rate at MTI, which itself increased each year during the grant period.

3. The number of people earning certification in *SDECP* programs did not increase from years prior to the grant award. Graduation rates in those programs did increase beyond pre-grant levels.

4. The vast majority of participants in the *SDECP* project were enrolled in the Power Line Construction and Maintenance program, as were a corresponding number of certifications.

5. Despite efforts to recruit increased numbers of minority and non-traditional students into *SDECP* programs, overall diversity in those programs remains largely unchanged.

6. During the first three years of the grant period, a total 382 participants were enrolled in an *SDECP* program. 324 of those participants, or 85%, earned certification in one of the *SDECP* programs. About 80% of those certifications were one-year diplomas.

V. Conclusions

1. Mitchell Tech has long-standing, exemplary partnerships with energy and utilities industries in its region. Many *SDECP* instructors maintain strong relationships with former industry employers and associates. Advisory boards offer regular and structured input and feedback to MTI. Donated equipment, tuition assistance, internships, and employment from industry partners add value to each *SDECP* program, instructor, and student.

2. MTI capitalized on its participation in all four rounds of TAACCCT grant funding. Lessons learned during earlier rounds were applied in later rounds. A student success tool kit developed in Round 1 provided strategies and materials helpful in the efforts in creating the Center for Student Success in Round 4. An expanded technology infrastructure developed in Round 2 continues to support MTI's capacity to deliver technical education at a distance. Round 3 focused on using technical simulators and simulations to better prepare students. A simulation coordinator position added during Round 3 continues to serve a variety of MTI programs. Partnerships with industry, other technical colleges, and government agencies continue to grow as a result of participation in the TAACCCT grant program.

3. Efforts to develop a Registered Apprenticeship for the PL program were substantial but came with unexpected challenges in getting industry involved in the effort. Further research is needed about other successful models of getting graduates into the workforce, in addition to registered apprenticeships.

4. The awards and recognitions MTI received during the grant period are well deserved. Its culture is professional and caring, with high levels of expectation and accountability. The growth in Mitchell Tech's institutional capacity accelerated as a result of multiple rounds of TAACCCT grant funding. Most importantly, the majority of that growth is being sustained.

Appendix A: Required Evaluation Questions

South Dakota Energy Career Pathways Research Questions	
Implementation Analysis	**Outcomes/Impact Analysis**
How were the PL diploma, PNG diploma, IMT diploma, EUST AAS degree, UT-HCT AAS degree, and UT-PL degree curriculums revised and to what extent were the changes implemented? How were the revised curriculums improved or expanded?	To what extent did MTI meet or exceed its targeted goals for each outcome measure required by the TAACCCT program?
How were the new curriculums for the EUST transition program for prior electrical skills and the IMT (Maintenance & Controls) AAS degree developed and to what extent were they implemented? How were the curriculums improved or expanded?	To what extent have the MTI TAACCCT grant activities impacted an increase in the number of grant participants earning A.A.S. degrees, diplomas and national certification in high-skill, high-wage occupations in the Energy sector?
Did SDECP redesign the curriculum for developmental classes in English and math? How was the curriculum improved or expanded? What delivery methods were offered (i.e. distance education or traditional classroom)? How did SDECP incorporate innovative instructional technologies into the program (e.g., simulations, simulators)?	To what extent have the MTI TAACCCT grant activities impacted a replication of effective methods for designing and delivering instruction?
What policies and procedures did MTI develop and implement to improve its ability to meet the needs of a diverse student population? Did SDECP develop and conduct a marketing campaign to reach a diverse student population? Did SDECP conduct outreach activities facilitate career interest and promoted diversity?	To what extent have the MTI TAACCT grant activities impacted improved employment outcomes?
Did MTI conduct an in-depth assessment of participants' prior learning and experiences to select them into the grant program? If so, what assessment tools and process were used? Were the assessment results useful in determining the appropriate program and course sequence for participants?	In what ways were targeted "occupational areas" changed and/or enhanced by the grant's operation?
What contributions did each of the partners and/or stakeholders provide towards program design, curriculum development, recruitment, training, placement, program management, leveraging of resources, and/or commitment to program sustainability?	To what extent did the project expand institutional capacity?
What factors contributed to partners' involvement or lack of involvement in the program?	Is SDECP sustainable?
Which contributions from partners were most critical to the success of the grant program?	

Appendix B: Survey Instruments

South Dakota Energy Career Pathways

Student Survey - Spring 2017

The South Dakota Energy Career Pathways project (SDECP) is funded by a grant from the U.S. Department of Labor. SDECP supports six different energy programs at Mitchell Technical Institute. The project strives to increase the number of qualified workers in the energy and utilities industries in South Dakota. Please respond to the questions below to provide feedback about your experiences with the SDECP programs at Mitchell Technical Institute. All individual responses are kept confidential. Thank you!

* 1. In which MTI program are you currently enrolled?

- [ ] Power Line Construction and Maintenance (Diploma)
- [ ] Propane and Natural Gas Technologies (Diploma)
- [ ] Industrial Maintenance Technologies (Diploma)
- [ ] Industrial Maintenance Technologies (AAS)
- [ ] Electrical Utilities and Substation Technology (AAS)
- [ ] Utilities Technology (AAS)
- [ ] Other (please specify)

* 2. In which semester did you enroll in that program?

- [ ] Fall 2014
- [ ] Spring 2015
- [ ] Fall 2015
- [ ] Spring 2016
- [ ] Fall 2016
- [ ] N/A
- [ ] Other (please specify)

3. How did you hear about the program at MTI? (check all that apply)

- [ ] Online information and advertisements
- [ ] Printed materials like program flyers and advertisements
- [ ] Radio and TV ads
- [ ] Billboard ads
- [ ] MTI recruitment events like camps, school tours, energy trailer, etc.
- [ ] Family and friends
- [ ] I don't remember
- [ ] MTI Instructor
- [ ] School visit by MTI representative
- [ ] Other (please describe)

* 4. What are your immediate plans following graduation?

- ◯ Continue learning in a related or advanced program at MTI
- ◯ Employment
- ◯ Don't know
- ◯ Other - please specify

5. If you chose Employment in question 4, please provide the following information. If not, skip to question 6.

Name of Employer	
Location of Employer	
Your position	

* 6. Were you awarded any academic credit in your program for prior learning experiences such as previous courses, certifications, or work experiences?

- ◯ Yes
- ◯ No
- ◯ Unsure

Comments

* 7. Please rate the effectiveness of the how your program is organized (weekly readings, assignments, and discussions, etc.).

- ◯ Extremely Effective
- ◯ Effective
- ◯ Somewhat Effective
- ◯ Not Effective
- ◯ Unsure

Comments

* 8. Please rate the effectiveness of the program instructors in managing the delivery of the content (lecture, demonstrations, projects, collaborative learning).

- ◯ Extremely Effective
- ◯ Effective
- ◯ Somewhat Effective
- ◯ Not Effective
- ◯ Unsure

Comments

* 9. How responsive are the instructors to your questions and in addressing your needs?

- ◯ Extremely Responsive
- ◯ Responsive
- ◯ Somewhat Responsive
- ◯ Not Responsive
- ◯ Unsure

Comments

* 10. How relevant is the content of the program to your current and/or future work?

- ◯ Extremely Relevant
- ◯ Relevant
- ◯ Somewhat Relevant
- ◯ Not Relevant
- ◯ Unsure

Comments

* 11. To what extent does the inclusion of technology (driving simulators and computer-based simulations) enhance the program for you?

- ◯ Greatly enhances my understanding of the course content
- ◯ Enhances my understanding of the course content
- ◯ Somewhat enhances my understanding of the course content
- ◯ Does not enhance my understanding of the course content
- ◯ Unsure
- ◯ N/A
- ◯ Other (please specify)

* 12. To what extent is the tech support at your school responsive and helpful?

- ◯ Extremely responsive and helpful
- ◯ Responsive and helpful
- ◯ Somewhat responsive and helpful
- ◯ Not responsive and helpful
- ◯ N/A
- ◯ Unsure

Comments

* 13. To what extent does the use of simulations (real-life scenarios) enhance the program for you?

- ◯ Greatly enhances it
- ◯ Enhances it
- ◯ Somewhat enhances it
- ◯ Doesn't enhance it
- ◯ Unsure
- ◯ N/A

Comments

* 14. How often during your program are you able to use simulations?

- ◯ At least weekly
- ◯ At least monthly
- ◯ At least once per semester
- ◯ Never
- ◯ Unsure
- ◯ N/A

Comments

* 15. To what extent does the use of the outdoor lab enhance the program for you?

- ◯ Greatly enhances it
- ◯ Enhances it
- ◯ Somewhat enhances it
- ◯ Doesn't enhance it
- ◯ Unsure
- ◯ N/A

Comments

* 16. How often during your program are you able to use the outdoor lab?

- ◯ At least weekly
- ◯ At least monthly
- ◯ At least once per semester
- ◯ Never
- ◯ Unsure
- ◯ N/A

Comments

* 17. To what extent do you feel informed about the current employment outlook for your field?

- ◯ Very informed and updated
- ◯ Generally informed
- ◯ Somewhat informed
- ◯ Not informed
- ◯ Unsure

Comments

* 18. To what extent are you informed about how your current program can lead to additional or advanced coursework and certifications within the fields of energy or utilities?

- ◯ Very well informed and updated
- ◯ Informed only at the time I registered
- ◯ Mostly informed by other students after I enrolled
- ◯ Not informed about additional program options
- ◯ Unsure
- ◯ NA

Comments

* 19. Once you complete your current program, how likely are you to continue learning in a related or advanced program at MTI?

- ◯ Extremely likely
- ◯ Likely
- ◯ Somewhat likely
- ◯ Not likely
- ◯ Unsure

Comments

* 20. Overall, how satisfied are you with the quality of your experiences in the program?

- ◯ Very satisfied
- ◯ Satisfied
- ◯ Somewhat Satisfied
- ◯ Not Satisfied
- ◯ Unsure

Comments

21. Which parts or aspects of your program contribute most to your learning?

22. Please provide any additional comments or suggestions you may have about how your program could be improved.

South Dakota Energy Career Pathways

Instructor Survey - Spring 2016

The South Dakota Energy Career Pathways project (SDECP) is funded by a grant from the U.S. Department of Labor. SDECP supports six energy programs at Mitchell Technical Institute. The project strives to increase the number of qualified workers in the energy and utilities industries in South Dakota. Please respond to the questions below to provide feedback about your experiences with the SDECP grant program. All individual responses are kept confidential. Thank you!

* 1. For which program are you currently teaching?

- ◯ Power Line Construction and Maintenance (Diploma)
- ◯ Propane and Natural Gas Technologies (Diploma)
- ◯ Industrial Maintenance Technologies (Diploma)
- ◯ Industrial Maintenance Technologies (AAS)
- ◯ Electrical Utilities and Substation Technology (AAS)
- ◯ Utilities Technology (AAS)
- ◯ Other (please specify)

* 2. I am/was closely involved in developing the curriculum for the courses in my program.

- ◯ Strongly agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree
- ◯ Unsure
- ◯ N/A

Comments:

* 3. How was the curriculum for the courses you teach improved or expanded as a result of South Dakota Energy Career Pathways grant project?

* 4. I am/was closely involved in marketing the program and recruiting students.

- ◯ Strongly agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree
- ◯ Unsure
- ◯ N/A

Comments:

* 5. I am/was closely involved in assessing students for potential enrollment in the program.

- ◯ Strongly agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree
- ◯ Unsure
- ◯ N/A

Comments:

* 6. The technology infrastructure at my school effectively supports the technological applications in my program.

- ◯ Strongly agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree
- ◯ Unsure
- ◯ N/A

Comments:

* 7. The outdoor lab is critically important in effectively preparing students in my program for the workplace.

- ◯ Strongly agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree
- ◯ Unsure
- ◯ N/A

Comments:

* 8. How often do your students use the outdoor lab in your program?

- ◯ At least weekly
- ◯ At least monthly
- ◯ At least once per semester
- ◯ Never
- ◯ Unsure
- ◯ N/A

Comments:

* 9. The use of online simulations and scenarios is critically important in effectively preparing students in my program for the workplace.

- ◯ Strongly agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree
- ◯ Unsure
- ◯ N/A

Comments:

* 10. How often do your students engage with online simulations and scenarios in your program?

- ◯ At least weekly
- ◯ At least monthly
- ◯ At least once per semester
- ◯ Never
- ◯ Unsure
- ◯ N/A

Comments:

* 11. The grant funds available from the South Dakota Energy Career Pathways project were used to enhance my program in a significant way.

- ◯ Strongly agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree
- ◯ Unsure
- ◯ N/A

Comments:

* 12. My program uses a competency based approach for some of the skills the students need to develop.

- ◯ Strongly agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree
- ◯ Unsure
- ◯ N/A

Comments:

* 13. Employers who are connected to my program contribute ideas about the way the program is designed and delivered.

- ◯ Strongly agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree
- ◯ Unsure
- ◯ N/A

Comments:

* 14. My program actively creates opportunities for students to interact with energy and utilities employers.

- ◯ Strongly agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree
- ◯ Unsure
- ◯ N/A

Comments:

* 15. My program will be able to sustain the equipment and materials acquired by the grant after the grant ends.

- ◯ Strongly agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree
- ◯ Unsure
- ◯ N/A

Comments:

16. How has your involvement in the South Dakota Energy Career Pathways project impacted your teaching?

17. Please describe any technology applications made possible by the grant which are highly effective in preparing students in your program.

18. Additional comments?

Appendix C: Interview Instruments

MTI – Round 4 SDECP
Instructor Interviews
July 11, 2016

Introductions and Purpose

1. At this point in the project, what is going well from your perspective? What are your accomplishments with the project? What are your current challenges?
2. What kinds of certifications are involved with the program? Which are "stackable and/or latticed"?

Curriculum Design and Delivery

3. How was the curriculum for this particular program selected, used, and/or created?
4. How is the program being improved or expanded using TAACCCT grant funds?
5. What delivery methods are utilized in the program?
6. In what ways, if any, is the program "competency based"?
7. In what ways, if any, does the program utilize the simulation lab(s) at your school?
8. If what ways, if any, were the curriculum for developmental classes in English and math redesigned as part of the project ?

Student Recruitment and Assessment

9. How is the program being marketed to students? Did SDECP develop and conduct a marketing campaign to reach a *diverse* student population? Did SDECP conduct outreach activities facilitate career interest and promoted diversity?
10. How are students being selected for the program? Did MTI conduct an in-depth assessment of participants' prior learning and experiences to select them into the grant program? If so, what assessment tools and process were used? Were the assessment results useful in determining the appropriate program and course sequence for participants?
11. What support services and other services are offered to students in the program?

Partnerships

12. What kinds of partnerships, if any, help support the program?
13. What opportunities, if any, have been created for employer and student interaction so far? How successful are those efforts? What challenges remain?

Other

14. What other information would you like to share about the project at your school?
15. What other kinds of information would you like to see collected about the project?

MTI – Round 4 SDECP
Instructor Interviews
May 7, 2018

Introduction and Updates

1. We last interviewed you in July of 2016. **What are the biggest accomplishments and challenges for your programs since that time?**

2. Have there been any changes to the number or kinds of certifications earned in your programs? If so, please describe.

Curriculum Design and Delivery

3. **In what ways did the TAACCCT grant impact the curriculum for your programs?**

4. **How did replacing the Propane and Natural Gas program with Natural Gas Technology program affect your programs?**

5. **How has the TAACCCT grant impacted the way you teach?**

6. In what ways are your programs "competency based"?

Student Recruitment and Assessment

7. In 2016, you told us that students in your programs just register and that you take whoever you get. Do you think a "selection process" which includes assessing and/or interviewing students is necessary? Why or why not?

8. **What support services at MTI are your aware of to help students complete your programs successfully?**

Partnerships

9. We've attended many of the advisory board meetings for your programs. What are the most valuable things the advisory boards do for your programs? Are there any ways the advisory boards hinder your programs? If so, how?

10. **What opportunities have been created for employers and students to interact? How successful are those efforts? What challenges remain?**

11. **What is the status of the registered apprenticeship program for Power Line? What kinds of things support its success and what kinds of things may be barriers?**

Dissemination

12. **Please share any key lessons that would help others who may want to replicate your programs.**

13. What other information would you like to share about the TAACCCT grant or your programs?

South Dakota Energy Career Pathways

Interview with Carol Grode-Hanks, MTI Dean of Academics

February 2018

1. Could you please explain your role as **Dean of Academics**?
2. As part of the Round 4 TAACCCT grant, **how was the curriculum revised** for the following programs and to what extent were the changes implemented?
    - PL diploma
    - PNG diploma
    - IMT diploma
    - EUST AAS degree
    - UT-HCT AAS degree
    - UT-PL degree
3. What **delivery methods** were offered (i.e. distance education or traditional classroom)?
4. How did SDECP incorporate **innovative instructional technologies** into the program (e.g., simulations, simulators)?
5. How were the **new curriculums** for the EUST transition program for prior electrical skills and the IMT (Maintenance & Controls) AAS degree developed and to what extent were they implemented?
6. How did the SDECP project redesign the curriculum for **developmental classes in English and Math?**
7. What is the **role of the Advisory Boards** in the development and/or revision of curriculum in general?
8. How have TAACCCT grant activities influenced how **effective ways of designing and delivering instruction** are developed?
9. From your perspective, would you describe the **impact of Round 4 grant** on MTI's Energy programs as Mild Impact, Moderate Impact, or Major Impact?
10. What, if any, **unintended consequences** surface during the project?
11. What **additional information** would you like to share about the SDECP grant project?

South Dakota Energy Career Pathways

Interview with Kellie Nielsen, MTI Diversity Coach

February 2018

1. Could you please explain your role as **Diversity Coach**?

2. What kinds of **activities** are you implementing that focus on meeting the needs of the more diverse student population?

3. What **policies and/or procedures** did MTI develop and implement to improve its ability to meet the needs of a more diverse student population?

4. Did SDECP develop and conduct a **marketing campaign** to reach a diverse student population? Please give examples.

5. Did SDECP conduct **outreach activities** facilitate career interest and promoted diversity? Please give examples.

6. To what extent has the **amount of diversity** in the student population at MTI increased in general? In the TAACCCT grant programs?

7. What **additional information** would you like to share about diversity at MTI?

South Dakota Energy Career Pathways

Interview with Clayton Deuter, MTI Dean of Enrollment

February 2018

1. Could you please explain your role as **Dean of Enrollment**?

2. Did SDECP develop and conduct a **marketing campaign** to reach a diverse student population? Please give examples.

3. Did SDECP conduct **outreach activities** facilitate career interest and promoted diversity? Please give examples.

4. Did MTI conduct an in-depth **assessment of participants' prior learning and experiences** to select them into the grant program? If so, what assessment tools and process were used?

5. How were the assessment results useful in determining the **appropriate program and course sequence** for participants?

6. To what extent has the **amount of diversity** in the student population at MTI increased in general? In the TAACCCT grant programs?

7. What **additional information** would you like to share about the SDECP grant project?

South Dakota Energy Career Pathways

Interview with Darla Kortba, MTI Registrar

February 2018

1. Could you please explain your role as **Registrar**?

2. Can you please explain the **assessment process** that takes place for students applying to MTI for admission?

3. Was there an additional process in place to **select students into the TAACCCT grant program**?

4. One aspect of the TAACCCT programs involves offering credit to students for their **prior learning and experience.** How is this done at MTI in general? Is there a documented process in place?

5. Please share any **specific examples** of how prior learning and experience may have resulted in credit(s) awarded within the SDECP grant programs.

6. From your perspective, would you describe the **impact of the Round 4 grant** on MTI's Energy programs as Mild Impact, Moderate Impact, or Major Impact?

7. What **additional information** would you like to share about the SDECP grant project?

South Dakota Energy Career Pathways at Mitchell Technical Institute

Focus Groups – April 13, 2018 at the Energy Training Center

Participants

10:00 – 11:00 AM Electrical Utilities and Substation Technology (EUST) Students

11:30 – 12:30 PM Power Line Construction and Maintenance (PL) Students

Research Questions (Required by TAACCCT)

1. What delivery methods were offered?
2. How were innovative instructional technologies incorporated into the program?
3. What efforts were made to recruit and support a more diverse student population?

Introduction and Purpose of Focus Group (5 minutes)

Questioning Route

1. Please introduce yourself and tell us how you became interested in either the Power Line program or Substation program. (5 minutes)
2. What program did you complete during your first year at MTI? (EUST second year students only) (5 minutes)
3. What would you say are strengths of the current program? (10 minutes)
4. What needs improvement in the current program? (10 minutes)
5. What kinds of things could MTI do to recruit and support more diverse students (minority, non-traditional) for these Energy programs? (10 minutes)
6. What other advice would you have for MTI's instructors and leaders? (5 minutes)
7. Of the things we discussed today, which are most important to you? (5 minutes)
8. Final thoughts? (3 minutes)

Summary of Key Messages (2 minutes)

Appendix D: Site Visit Agenda Example

South Dakota Energy Career Pathways Project

Evaluation Site Visit - November 16, 2017

John Swanson and Karen Taylor, TIE

Agenda

8:00 – 9:00 AM Apprenticeship Roadshow – SD DLR

9:30 – 11:00 AM Meet with John Heemstra

- Highlights / Updates for Round 4 – Registered Apprenticeship, Natural Gas Technology program, other

- Discuss Year 4 Data Collection – determine times and processes for interviews, surveys, site visits

- Discuss MTI input for data collection instruments

- Review Level of Implementation Matrix

- Other

Appendix E: Partner Donations

Donations to the Energy Programs					
updated 12.8.16					
	Donation From:	**Item(s) Donated**	**Date Donated**	**Estimated Value**	**Program Receiving Donation**
	City of Vermillion	Steel Structures	Jun-10	$ 3,000	Substation
		Circuit Breaker Switches			
	City of Vermillion	??	Jun-10	$ 45,000	Powerline
	West River Electric	Steel Structures	Jun-13	$ 1,500	Substation
		Distribution Switches			
	East River Electric	SF6 Circuit Breaker	Sep-13	$ 9,500	Substation
		Charger			
		3 Voltage Regulators			
		Insulators			
	Northwestern Energy	30 Gas meters	Oct-14	$ 3,000	PNG
	Central Electric in Mitchell	Underground and overhead conductors for power line	Jan-15	$ 250	Substation
	Northwestern Energy	Oil Circuit Breaker	Feb-15	$ 1,500	Substation
		Steel Structures			
		Fiberglass Switching Sticks			
	Sioux City Energy Coleman, SD	Oil Circuit Recloser Control Panel	Feb-15	$ 1,200	Substation
	Northwestern Energy	Aluminum Substation metal; switches; insulators; wire	Apr-15	$ 4,000	Substation
	Central Electric Coop	Wire	Apr-15	$ 400	Powerline
	Excel Energy	4 115 KV SF6 Breakers	Not yet		Substation
	Central Electric	3000 ft URD wire ($1.98/ft)	Sep-15	$ 5,940	Powerline
	Central Electric	Cross Arms 75	Sep-15	$ 800	Powerline
	West Central Electric	Used Digger Truck	Sep-15	$ 15,000	Powerline
	Transcanadian Oil Pipeline	2 Cirucuit Breakers	Sep-15	$ 40,000	Substation
	Blattner energy	Truckload of Misc Equip	Oct-15	$ 100,000	Substation
	Excel Energy	2 115kv circuit Breakers	Q4 2015	$ 100,000	Substation
	Groebner & Assoc	2 Sensits Comb Gas Detectors	Q4 2015	$ 4,000	PNG
	Laminated Wood Syst	Cost reduction on 4 laminate poles	Q1 2016	$ 30,000	Substation
	East River Elect	69KV gang operated air break switch	Q1 2016	$ 1,000	Substation
	Northwestern Corp	Steel & Aluminum parts	Q1 2016	$ 17,900	Substation
	Jerry's Electric	30 pole top & 8 pad mount transformers	Q2 2016	$ 7,600	PL
	Jerry's Electric	9 Type L reclosers	Q2 2016	$ 1,000	Substation
	Northwestern Energy	10 poles, 6 regulators; 2 reclosers;	Q2 2016	$ 5,000	Substation
	Northwestern Energy	2007 Intl Truck with all-tech digger	Q2 2016	$ 18,000	Substation
	Black Hills Energy	4 MVAR Capacitor Bank & 11 reclosers	Q3 2016	$ 10,000	Substation
	Addison Construction	Two 15 KV Power Circuit Breakers	Q4 2016	$ 2,000	Substation
	Larson Trailer Sales	Reel Truck	Q4 2016	lease a $30,000 for $3000	PL

Mitchell Technical Institute
TAACCT Grant - Round 4
Leveraged Resources Reporting (External)
8/20/2018

January 1 - March 31, 2017

Organization	Contribution	Direct Student Support (Books, tuition, fees – costs not allowed by SGA)	What provided
Bartels Endowed		$ 500	Scholarship - 1 PL student
Brian Zambo Fallen Linemen		$ 1,000	Scholarship - 1 PL student
Dennis Knouse Memorial		$ 500	Scholarship - 1 PL student
Dennis Merchant Memorial Endowed		$ 1,000	Scholarship - 1 PL student
East River Electric Cooperative		$ 1,000	Scholarship - 1 PL student
Larry Brink		$ 500	Scholarship - 1 PL student
Mark & Kathy Hofer - PL		$ 500	Scholarship - 1 PL student
NorthWestern Energy		$ 2,000	Scholarship - 1 PL & 1 EUST students
Otter Tail Power Company		$ 2,000	Scholarship - 1 PL & 1 EUST students
Randy Herr Memorial Scholarship		$ 750	Scholarship - 1 PL student
SD Line Superintendents		$ 3,500	Scholarship - 5 PL students
Xcel Energy		$ 3,000	Scholarship - 2 PL & 1 EUST students
Xcel Energy		$ 3,000	Scholarship - 2 PL & 1 EUST students
Black Hills Energy - 4 Line hoses	$ 1,200.00		

April 1 - June 30, 2017

Organization	Contribution	Direct Student Support (Books, tuition, fees – costs not allowed by SGA)	What provided
Xcel Energy	$ 5,000		Underground high voltage thumper
Montana Dakota Utilities	$ 49,000		Seven 3-phase oil circuit reclosers
Black Hills Energy	$ 54,000		200 sets of Class 2 Rubber gloves

July 1 - Sep 30, 2017

Organization	Contribution	Direct Student Support (Books, tuition, fees – costs not allowed by SGA)	What provided
Induction Automation	$ 14,995		Ingnition Pro Software & Supplies
Xcel Energy	$ -	$ 8,000	scholarships
East River Electric	$ -	$ 1,050	scholarships

January 1 - March 30, 2018

Organization	Contribution	Direct Student Support (Books, tuition, fees – costs not allowed by SGA)	What provided
	$ 130,000		Substation and switching equipment

Appendix F: Job Fair Tips for Students

Job Fair Tips

1. Walk around to get a feel for the setup and then carefully chart your own course.

2. Go alone. Friends may keep you from visiting exhibits that are of primary interest to you. Also, this is a time to sell yourself and being in a group will hinder this opportunity.

3. Don't be shy! Be assertive and show initiative – shake hands and introduce yourself to the recruiters when you reach their booth. Speak up! Make eye contact with the representatives. If you discover you have chosen the wrong company, thank them and move on.

4. Listen attentively! Gather information. Learn as much as you can about the various opportunities available.

5. Be enthusiastic – employer surveys identify the single most important personal attribute students can bring to their first regular employment position is ***enthusiasm***. So, smile and project interest in the company!

6. There may be many job seekers approaching employers at the same time as you. Don't be overwhelmed by the experience. Keep a positive attitude and concentrate on the benefits of the experience. Be patient and wait your turn.

7. Avoid questions about salary and benefits.

8. Pick up a business card at each booth you visit. Writing a brief note on the back of each card will help you recall your conversation with the company's representative. Help yourself to the company literature.

9. Remember, this is not an interview, but it is **your opportunity** to make a crucial first impression! ***(However, be prepared for an on-the-spot interview, if you are fortunate enough to be offered the opportunity).***

10. Prepare a one-minute commercial to introduce yourself. Think about your education, strong points, and goals and develop an introduction that you an use to start the conversation on a positive note.

11. Be prepared to discuss where you want to work geographically, what you like doing, what you are looking for in a job and your most relevant skills. Also, be sure to include how you can be a positive asset for the company.

12. Take several copies of your resume to the job fair. Take more than you think you will need. Make the resumes easily accessible by using a file folder to carry your resumes.

13. Dress appropriately and professionally. Even though a job fair is more casual than a formal interview, you only have one time to make a positive first impression. It is better to exceed, than to not meet, an employer's expectations regarding your appearance. Do not wear baseball caps or blue jeans, keep jewelry to minimum and have no visible facial piercings.

14. Limit the number of "freebies" you take from the companies represented at the job fair. At some point, having to carry all the items will become awkward.

15. Send a thank you note to company representatives you were especially excited to meet. Let them know you are interested in their company. This positive approach can make a difference for you in the future.

Appendix G: MTI's Double Edge Program

Workforce Recruitment Program

Looking for great employees? Mitchell Technical Institute's Workforce Recruitment Program helps a company sponsor a student in a program related to that business. Your company pays a portion of tuition and fees and the student agrees to work for you after graduation in a relevant job at a competitive wage.

What do you do?

- Assist in recruiting and screening candidates
- Provide job-shadowing experiences
- Interview prospective students for program acceptance
- Provide a paid internship between the first and second years of the program
- Offer full-time employment with competitive wages once the student graduates (not a contractual obligation)

What does the student do?

- Meets the program requirements to enroll
- Submits to a background check and a drug screening
- Maintains a GPA of at least 2.5
- Regularly attends all classes
- Completes a paid internship with the company
- Takes the MTI Student Success course
- Signs an agreement to remain employed with the business after graduation for the predetermined number of years
- Has all funds received forgiven if the terms of the contract are fulfilled
- Is obligated to reimburse the company for funds received upon default of the agreement by the student

The DOUBLE EDGE

MTI's DOUBLE EDGE program brings together the appeal and success of the Workforce Recruitment Program with the financial resources of the Build Dakota Scholarship program.

How does it work?

Like our Workforce Recruitment Program (WRP), you select the student you want to sponsor. We help you with all the paperwork. The student agrees to work for you for three years after graduation. You write us a check. The Build Dakota program funds the remainder. The student gets a high-quality MTI education for free, incurs no debt and has a guaranteed job waiting after graduation. If for any reason the student no longer qualifies or decides not to accept employment with your company, he or she will pay back the money, just like a student loan.

Great news for the student, too! A student who has an employer match goes to the top of the eligibility list.

Don't spend thousands seeking, hiring and training one employee! Your recruiting and advertising dollars will go twice as far with the MTI DOUBLE EDGE program!

Build Dakota Scholarship Program

The Build Dakota Scholarship is offered to train workers to fill skilled positions in South Dakota industries. Students can be awarded a full ride in an eligible program. So, what's the catch? A student must keep grades up (minimum 2.5 GPA) while enrolled in the program and agree to spend three years working in South Dakota for an industry in need of those skills after graduation (or they pay the scholarship back).

Who qualifies?

- DOUBLE EDGE. Receive scholarship funds from a future employer, with a guaranteed job after graduation. Build Dakota will cover the remainder of school costs.
- Non-resident students wanting to re-locate or return to South Dakota for education and career advancement.
- Non-traditional and transfer students.
- Students entering a high-need career area.
- New students entering MTI for the first time.
- Merit and need based. Students must be ready to enter standard coursework and be eligible to receive federal financial aid.

Eligible MTI Programs

- Architectural Design & Building Construction
- Automation Controls/SCADA
- Electrical Construction & Maintenance
- Electrical Utilities & Substation Technology
- Farm Power Technology
- GPS GIS Mapping Technology
- Heating & Cooling Technology
- Information Systems Technology
- Licensed Practical Nursing (LPN)
- Medical Laboratory Technology
- Precision Ag Technology
- Telecommunications
- Welding & Manufacturing Technology
- Wind Turbine Technology

Appendix H: MTI's Registered Apprenticeship Program

Mitchell Technical Institute

Power Line Registered Apprenticeship Program

Mitchell Technical Institute is pleased to introduce the Power Line Registered Apprenticeship training program offered through the division of Advanced Technical Education. This registered apprentice program will allow MTI graduates to pursue Journeyworker status within their energy career, framed within a formalized, recognizable structure.

Completers of the program are awarded a Journeyworker certificate from the US Department of Labor and Apprentice Graduate Certificate from Mitchell Technical Institute.

As a recognized sponsor, MTI is able to provide the curriculum necessary for apprentices to reach Journeyworker lineman status, track and report their hours within the required work processes and, if needed, train them on campus for specific skills.

The process to register a new worker in our Apprentice Training program is simple, requiring only a review of the apprenticeship standards and a signed employer acceptance agreement. The cost can be paid by you or by the apprentice; either way, the apprentice lineworker will receive a high quality, online program with the support and experience of Mitchell Tech!

Students will concurrently register as apprentices upon entering the full time Power Line Construction and Maintenance program at MTI. The courses they complete during their first year of enrollment, along with the field training and lab activities, will allow them to advance to a second-year level apprentice after completing the requisite number of on-the-job hours, typically 1,000, following graduation.

The program will follow a defined work process schedule as required by the terms of the apprenticeship:

- Overhead and underground construction
- Overhead and underground maintenance
- Secondary connections and lighting
- Use and care of tools and equipment
- Vehicle inspection and maintenance
- OCR/regulators/capacitors
- Transformers and metering
- Engineering and staking
- Rolling stock or inventory
- Records
- Safety meetings
- Live line maintenance

Act today! If you have eligible workers employed in 1,000 hour positions or you are considering an apprenticeship program for a new hire, contact MTI today:
training@mitchelltech.edu • 800.684.1969

www.mitchelltech.edu

Mitchell Technical Institute
Registered Apprentice Lineman Program

History:
Mitchell Technical Institute has provided entry-level lineman training since 1975. We are pleased to introduce the Apprentice Lineman Training program offered through the division of Advanced Technical Education. This program will allow students to pursue Journey Worker status within their career field, framed within a formalized structure recognized as a Registered Apprenticeship. Completers of this apprenticeship program will be awarded a Journey Worker certificate from the US Department of Labor and a transcript with academic credits from MTI which are applied toward completion of an Associate of Applied Science Degree (AAS). As a recognized Sponsor of apprenticeships by the US Dept. of Labor, MTI can manage this apprenticeship throughout the training career with multiple employers. Through the combination of on-the-job training (OJT) and related training and instruction (RTI), apprentice lineman advance through their power line careers to journeyman lineman.

How it works:
Once our MTI power line students have successfully completed the MTI Power line program or a comparable training program they are eligible to participate in the MTI Apprentice Lineman program. They can receive credit for up to 292.5 hours of related training from their time at MTI or a comparable program. An additional 360 hours of related training and instructions is provided via the MyMTI online portal. The employer signs the "employer acceptance agreement" and provides the OJT and supervision of work within the required work processes. MTI or the sponsoring employer documents the hours within each work category and provides those work hours to MTI. Bi-annual review of your work and hours are provided by an Apprentice Training Committee (ATC) which allow the apprentice to advance through the 8000 hour apprenticeship. Between the 652.5 course hours and OJT experience, participants will be prepared to take the journeyman lineman exam. Apprenticeship completers are awarded an MTI certificate of completion and Journeyman Certificate from the US Dept. of Labor.

Who is involved:
In addition to their new employer and co-workers, participants will work with many of the same MTI staff they already know. The MTI power line instructors will provide support as needed via phone or email and the MTI Staff will add completed course work to an established transcript. The MTI Apprenticeship Director will be a point of contact for both the apprentice and the employer to answer questions and will monitor progress as they work through the MTI Apprentice Lineman program. Their experience with the MyMTI portal will allow participants to work through the online curriculum just as they have while attending MTI.

How much does it cost:
An annual fee includes the curriculum, MTI instructor support for the training documenting and reporting of hours, Employers can support apprentices with enrollment through a variety of means. Financial support is available the first year through a SD Dept. of Labor and Regulations grant. The sooner they enroll in a registered apprenticeship, the sooner they reach their career goal of Journeyman Lineman and all that comes with that experience and knowledge.

Year One – completed at MTI
Year Two - $1250 - $500(SD DOLR Grant Support) = $750
Year Three - $1250
Year Four - $1250
Additional Costs – (EnergyU login, $75/annually)
The Guidebook for Linemen and Cablemen – 2nd Edition (Wayne Van Soelen - ISBN-10, 1-1110-3501-6)
The Guidebook for Linemen and Cablemen – 13th Edition(Authors: Thomas Shoemaker and James, ISBN-10, 007185003)
Totals $3475 plus books (note: MTI graduates already possess both of these required books)

Doug Greenway, Director of Advanced Technical Education and Apprenticeships
doug.greenway@mitchelltech.edu | 605-995-7207
www.mitchelltech.edu/programs/advanced-technical-education/power-line-registered-apprenticeship

10/11/2017

Appendix I: Outcome Measures including Year 4 Projections

TAACCCT Round #4 – SD Energy Careers Pathway (SDECP) Grant
September 11, 2018

All Outcome goals attained 90% or higher results. Total participants at 95% and completers at 108%

	Project Outcomes	Outcomes (EUST, IMT, PNG, PL, UT) ✓ = Goal Met									
	(per DOL TAACCCT #2 SGA Appendix G, page 52)	Goal Year 1 9/30/15	Year 1 Actual	Goal Year 2 9/30/16	Year 2 Actual	Goal Year 3 9/30/17	Year 3 Revisions*	Goal Year 4 9/30/18	*Year 4 Projected*	Goal TOTALs	Actual TOTALS
1	Total Unique Participants Served	210	195	98	96	96	91	NA	0	404	*382 (95%)*
2	Total Number Who Have Completed a Grant-Funded Program of Study	102	106 ✓	81	83 ✓	69	84 ✓	NA	0	252	*273* ✓
3	Total Number Still Retained in Their Programs of Study (or Other Grant-Funded Programs)	118	87	96	93 ✓	93	90	NA	*85*	307	355 ✓
5a	Total Number of Students Completing Credit Hours	92	112 ✓	83	91 ✓	83	93 ✓	NA	*89* ✓	258	385 ✓
6	Total Number of Students Earning Credentials	102	158[1] ✓	81	91 ✓	69	100 ✓	NA	NA	252	324 ✓
7	Total Number Pursuing Further Education After Program of Study Completion and enter another program of study	10	21 ✓	10	16 ✓	10	12 ✓	NA	NA	30	49 ✓
8	Total Number Employed After Program of Study Completion (non-incumbent workers only)	32	35 ✓	30	46 ✓	30	59 ✓	0	*0*	92	140 ✓
9	Total Number Retained in Employment After Program of Study Completion (non-incumbent workers only) *(Note1)*	0	0[2]	31	19	29	34 ✓	26	*33* ✓	86	85 (99%)
10	Total Number of Those Participants Employed at Enrollment Who Receive a Wage Increase Post-Enrollment (incumbent workers)	48	36	46	48 ✓	46	34	6	*13* ✓	146	131 (90%)

Year 1 APR opened and revision submitted 11/04/16
Year 2 APR opened and revision submitted 4/25/17
Year 3 APR opened and revision submitted 9/11/18
Note1 – Outcome #9 is based on wage data reported by SD DLR, no data is available for participants working outside South Dakota.