



PATHWAY TO SUCCESS PROJECT

EVALUATION REPORT

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INTRODUCTION

The Pathway to Success project is a Trade Adjustment Assistance community College and Career Training (TAACCCT) project funded by the Employment and Training Administration of the Department of Labor (SGA/DRA PY 12-10). The grantee is Northern Wyoming Community College District (NWCCD), which is comprised of two distinct campuses, one in Gillette and one in Sheridan. Gillette College and Sheridan College are part of the NWCCD. All credits are awarded from the college district so students can take any class offered at either college.¹ Pathway to Success proposed to provide short term training focused on supervisory foundational skills and enhance existing programs using technology and targeted advising strategies. The project proposed to offer certifications in diesel technology, welding technology, machine tool technology, and engineering technician. The project enhances apprenticeship opportunities for HVAC and electrician trainees. The project also expands credit for prior learning opportunities. A stackable general technology program will be offered online to help students in apprenticeship programs toward achieving an AAS.

The evaluation team conducted an onsite visit to Northern Wyoming Community College District from April 28 – April 30. The purpose of the visit was to conduct a formative evaluation of the implementation of the project to date. The team spent time on both the Sheridan and Gillette campuses and toured the facilities. The team met with project personnel and interviewed CTE faculty and employer partner representatives. A student focus group was held on the Sheridan College campus. The focus group utilized a semi-structured interview process. The focus group process included an activity in which participants were asked to share their perspectives of various modes of technology used in the classroom as well as their perceived impact of those technologies on their learning. Participants were asked to rate their perspectives using sticky notes on a chart and provide an explanation about their ratings. In addition, the project reviewed relevant project documentation. This report provides a description of the project's progress and an overview of the findings.

¹ www.sheridan.edu

STRATEGY PROGRESS

MODIFY PROGRAMS TO MEET INDUSTRY AND STUDENT NEEDS

Programs Modified

The project proposed to modify six training and degree Career and Technical Education (CTE) programs: Welding Technology, Machine Tool Technology, Heating, Ventilation, and Air Conditioning (HVAC) Apprenticeship, Construction Apprenticeship, Electrical Apprenticeship, and Diesel Technology. In addition, the curriculum has been modified to develop a General Technology program. The General Technology program is an option for students who complete Apprenticeship programs to earn an AAS degree. The option is to be available only online. The programs were selected because of the high demand for those occupations in the region caused primarily by an aging and retiring workforce. Employers who were interviewed indicated that the skilled workforce shortage is becoming critical to their ongoing operations. In fact, one major employer in the region (L&H Industries) indicated that are currently looking for seven machinists and that they need at least two machine tool graduates each year just to keep up with retirements. A short description of each of the programs is provided below:

Welding Technology is offered at both the Gillette and Sheridan campuses. Students can work toward earning a one year certificate or an Associate of Applied Science in welding. In addition to the regular college application process, students must complete a separate application process to be admitted into the welding program.

Machine Tool Technology is offered at both the Gillette and the Sheridan campuses. Students can earn a one-year certificate or an Associate of Applied Science in Machine Tool Technology at either campus. The Machine Tool program is relatively new to the Gillette campus while the



program at the Sheridan campus is more established. The program at the Gillette campus teaches manual tooling techniques while the Sheridan campus teaches both manual and CNC (computerized) machine tooling (pictured left). In addition, the Sheridan campus teaches students how to work with 3-D printers, which employers project to be very important to the future of the manufacturing industry.

The Construction Apprenticeship is offered at the Sheridan campus and is taught as one aspect of the Construction Technology department. The apprenticeship program complements the working component required by the Wyoming Department of Labor for apprentices to become eligible receive a certificate of apprenticeship as a journeyman carpenter, which is nationally recognized. The project helped to start the apprenticeship aspect of the program by purchasing the needed woodworking equipment.

The HVAC Apprenticeship is offered at the Sheridan campus. It is taught in partnership with a local employer, Powder River Heating, who started out helping with labs and eventually took over the instruction of the courses. "The HVAC Apprenticeship Certificate provides educational components for the Sheridan area state-approved HVAC Apprenticeship that complements the 2000-hour-per-year, working component



needed to meet the yearly requirements set by the Bureau of Apprenticeship and Training, Wyoming Department of Labor, for apprentices to become eligible to sit for the journeyman's exam."² Students in the program are employed by various HVAC employers in the area. Courses are held over the period of four semesters with guided on-the-job training experiences provided by the employer. The program envisions using web-based and online learning to extend the program statewide or to the greater upper Midwest region. Amatrol simulator equipment was purchased to enhance the training and education provided in the program, shown above.

The Electrical Apprenticeship is offered as an option for students employed in electrical fields at both the Sheridan and Gillette campuses. Students in the Electrical Apprenticeship program earn a certificate of completion over the period of 4 years. Amatrol simulator equipment has been purchased for the program and is planned to be integrated into the instruction in the coming semester.



The Diesel Technology program is offered at both the Sheridan and Gillette campuses. The program includes options for students to earn a one-year certificate or an AAS in diesel technology. In addition to the regular college application process, students must complete a separate application process to be admitted into the Diesel Technology program. Students work in an environment that is very similar to a shop they may be work in upon completion.

The General Technology AAS has been redefined to an Industrial Technology AAS. The Supervision Certificate has 18 credit hours. The Business Certificate has 30 credit hours. The

² www.sheridan.edu

courses in each of these certificates have been added to elective options for the Industrial Technology AAS, which provides a stacked option for individuals obtaining an apprenticeship in HVAC, Electrical, or Construction. Options given include:

1. Apprenticeship (24 credits)
2. Apprenticeship and a Certificate in Supervision (42 credits)
3. Apprenticeship and a Certificate in Business (54 credits)
4. Apprenticeship, Certificate in Business and an Industrial Technology AAS (60 credits)
5. Apprenticeship, Certificate in Supervision and an Industrial Technology AAS (60-61 credits)
6. Apprenticeship, Certificate in Supervision, Certificate in Business and an Industrial Technology AAS (66 credits)

Programs are being modified incrementally by adding state-of-the-art equipment, web-based technology, and simulators. Equipment included the addition of Melt View document cameras that allow instructors to demonstrate welding techniques, for example, and allow students to have a close-up view on an external monitor located at a safe distance outside the welding booth. These demonstrations can be recorded for view and review later online on an on-demand basis. As of the time of the visit, the project had purchased all equipment and was in the process of installing it, with much of it already in place. Amatrol simulators have been added to the Diesel Technology, Electrical Apprenticeship, and HVAC Apprenticeship programs. The simulators allow students to learn hydraulics, for example, in a safe and controlled environment where the instructors can set up scenarios in which students can learn troubleshooting and problem-solving skills. The project has also been working toward modifying programs by developing some course aspects and full courses for online delivery. Instructors have been offered training in the use of Camtasia, YouSeeU, and Blackboard. As a result, some of the courses in the modified programs are, or are planned to be, offered as web-enhanced, hybrid, or fully online courses.

Partner Contributions

NWCCD has very strong and active partnerships with employers and industry in the region. Some of the larger employer partners include Cloud Peak Energy, Powder River Energy Corporation, Dick Anderson Construction, Powder River Heating and Cooling, and L&H Industries. Partners serve on advisory boards and provide valuable information regarding industry needs and emerging technologies. They work with NWCCD to provide authentic learning experiences in the form of cooperative education and/or internship placements when appropriate. Partners have assisted the colleges in getting some of the programs off the ground. In high demand fields, partners will go so far as to assign one of their employees as an instructor when needed. Industry partners provided instructors to both the Diesel Technology and Machine Tool Technology when NWCCD was in need in order to keep the courses going. The HVAC Apprenticeship courses are taught by an employer partner. The colleges' employer partners will not hire students until they have a degree in order to promote program completion. These partnerships are incredibly valuable in terms of continual program

improvement and helping the college ensure that the skills and knowledge taught continue to meet current industry standards.

The partnerships are also important to the employers. Partners view NWCCD as an integral part of supplying their ongoing workforce needs and are eager to hire NWCCD graduates. Toward that end, employers help to recruit students to the programs. Recruitment can include requiring their employees to enter an apprenticeship program at NWCCD as a requirement of continued employment, but it also includes advocating for the programs offered at the college to potential students. In fact, some of the partners indicated that they would like to see the college begin their recruitment efforts in middle school for these high demand and high skill areas. In addition, particularly for the machine tool technology program, they would like to help the colleges take steps to better explain what their trade looks like as a part of a ten-year plan. Oftentimes, students enter the Machine Tool degree program not really understanding the trade and end up leaving or transferring to another program. Employers believe that a stronger understanding of the occupation prior to enrollment will help recruitment to the field and help students be more likely to complete the program of study.

ADVISING/COACHING STUDENTS TO SUCCESS, PERSISTENCE, AND EMPLOYMENT

Advising/Coaching Strategies

A cornerstone of the Pathway to Success project is advising/coaching students to improve the probability of their success, persistence, and placement in the workforce. The project hired a full-time Advisor/Coach whose responsibility is to work with students in project programs. The belief is that CTE students require a different model for advising than the more traditional academic track student. The Advisor/Coach is Gina Kidneigh. Ms. Kidneigh works with CTE students and is tasked with developing an advising manual that reflects effective practices for working with CTE students at NWCCD.



Decentralized Advising

Ms. Kidneigh has been studying the literature and attended professional development to learn about different models of advising. She has found that Decentralized and Specialized Advising may have promise with students with whom she works. NWCCD has a centralized model of advising wherein the advisors are housed within a separate student services administrative unit. CTE students report that they do not often come to the building where the centralized advising offices are. She set up a separate office space unit in the CTE building where her advisees spend the bulk of their day. The move is viewed as very positive by students and faculty. This location has made her much more visible to CTE students and faculty. It has also allowed her to learn more about the CTE programs in which her advisees are enrolled.

Students very much appreciate Ms. Kidneigh's presence and assistance, particularly with the admissions and registration processes. They indicate that she is able to explain things in a way that they understand. Course registration is not a process that they are particularly interested in mastering and they are confident in her recommendations for them. She takes time to ask students about their professional and personal goals and then translates those goals to classes. For example, she may recommend that a carpentry student take a welding class or that a welding student take a machine tool class. In this way, she individualizes each student's learning plan to their interests and professional goals. In addition, she works with faculty regarding course registration for students to ensure that students get the best possible advice.

Ms. Kidneigh gets to know each student that she advises. She sometimes encourages students to try courses that match their interests. This helps to expose students to other potential career areas or to expand their skill sets to increase their marketability. At the same time, she helps ensure that students maintain a healthy balance between school and personal life. She believes that balance contributes to student retention and completion. Students often don't realize how demanding the coursework can be until it is too late. They appreciate her guidance in this area.



Students believe that Ms. Kidneigh really cares about them, which is important to them. They know they can talk with her about any issue that may negatively impact their success in the program. She assists them with separate admissions forms required by the Diesel Technology and Welding programs. She helps coordinate tutoring services when students need it. She has been instrumental in helping some of the students apply for Credit for Prior Learning (CPL). She advocates for students pursuing CPL and confers with faculty regarding approval of CPL. Several female students are expected to enter the CTE programs in the fall. CTE fields are typically male-dominated. Ms. Kidneigh is thinking about offering a support group for women in CTE programs.



The CTE faculty also appreciates the approach Ms. Kidneigh has taken with advising CTE students. She has taken the time to learn about their CTE programs and has become knowledgeable enough about them to answer questions from prospective students and "speak the language" of the field. She provides tours for prospective students and follows up with them after the tour. Faculty likes that she has a presence in the CTE building. They believe she is very personable and really cares about students. They also believe her role has helped to reduce student frustrations. The assistance she provides students in completing the extra application process not only helps students but also provides a streamlined format for the applications and ensures that the applications submitted are complete and accurate.

Coaching/advising has primarily occurred at the Sheridan campus with little activity at the Gillette campus. Gillette College has two professional advisors who handle the registration process for students there. While she has become a familiar part of the CTE programs at Sheridan College, Ms. Kidneigh has had less success with interfacing with students and faculty on the Gillette College campus.

CTE Coaching / Advising Manual

Ms. Kidneigh is in the planning stages of writing the advising manual for CTE students at NWCCD. She is documenting the strategies she is using to support CTE students. Feedback from students and faculty will serve as indicators of strategy effectiveness. In addition, as a part of the evaluation, retention and completion rates of CTE students who receive the coaching/advising services will be compared with CTE students who did not receive the services to determine if there are any statistically significant differences. In order to do the comparisons, it is critical that clear documentation be kept regarding who receives coaching/advising services and the types of services they receive. Strategies are inconsistently applied with students, particularly across the two campuses. It is important that Ms. Kidneigh, along with project administration, work with the Data Support Specialist to determine a clear method for coding the services provided and then that services provided are documented.

Career Placement Strategy

NWCCD does not currently have an official career placement office. The Pathway to Success project seeks to work toward developing a formalized process for facilitating career placement for CTE students. The strategy is described as following a student from pre-admission through career placement. As described above, the Advisor/Coach has been helping with pre-admission activities including answering inquiry calls and providing tours for potential students. She has also been helping students with program-specific admissions applications and has been very involved in coaching current students. Formal placement will be the next focus of her activities.

PRE-ASSESSMENTS TO IMPROVE READINESS, CONFIDENCE, AND COMPLETION

The Pathway for Success project utilizes ACT and Compass as pre-assessments for students. It also utilizes high school transcripts to conduct intentional student advising. CTE students often have different needs and goals than students in more academic tracks. Students who place below the level required for English 1010 are advised into an English course called English Plus that integrates a writing lab component. In this course, students are taught about paragraph development and third person voice appropriate for academic writing. According to interviewed personnel, students seem to do well with the integrated approach.

Pre-assessments that are used are not different than those that are used for academic track students. However, the results are utilized for identifying college readiness gaps and placing students into appropriate coursework. Data regarding student success and timely completion has not been collected since it is too early in the project. Data needs to be collected regarding student confidence, which can be collected through student surveys or focus groups. The pre-assessment process will need to be documented and integrated into the overall advising/coaching manual.

STRENGTHEN PROGRAMS WITH ONLINE AND TECHNOLOGY-ENABLED LEARNING

The Pathway to Success project works to improve the CTE classroom environment with equipment and simulators and the CTE learning experience with web-based technology. Several technologies were already available at NWCCD but underutilized, particularly by CTE faculty. A major focus of the project is to increase the use of Blackboard LMS so that students can access learning materials on demand at any time. Another focus was the use of Amatrol simulators and e-learning systems that were purchased through the project. Faculty professional development opportunities were provided to teach them more about the technologies that were available and of interest to them. Faculty worked with instructional designers to select appropriate technology that they believed would enhance the teaching and learning for particular courses. Factors considered by the faculty included their own readiness as well as the course content and the level of hands-on experiences that students required to develop the skills and knowledge promoted by the course. Those who received Amatrol simulators were eager to learn how to incorporate them into their classrooms. Those who had access to Amatrol e-learning systems were interested in seeing how they could be best utilized with students.

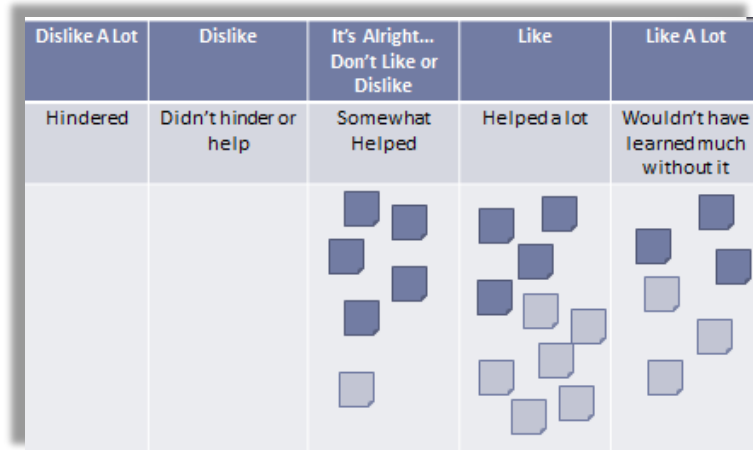
Technology in the Classroom

Amatrol simulators have been added into the Diesel Technology and HVAC classrooms. There are simulators that are in other CTE classrooms, as well. The instructors for those programs have received training on how to operate those simulators and program them for classroom lab use. The use of simulators provides a safe and controlled environment in which students can learn critical skills. For example, diesel technology students can work on troubleshooting hydraulics and if they do something incorrectly, they don't ruin a large and expensive piece of equipment or cause harm to themselves. CTE instructors are becoming more and more comfortable using simulators in the classroom. They see value in using simulators to provide hands-on experiences for students. However, they are limited in how they can use them. The CTE building has very little Internet access. The simulators can utilize multimedia resources in conjunction with the simulators. These resources require reliable Internet access.



The welding programs are using MeltView cameras in their classrooms. The cameras allow recording of welding processes demonstrations for safe viewing on a monitor away from the weld zone. This minimizes student or other observer exposure to the fumes and gases generated by the process. The recordings can be saved in a digital file for viewing later so

students can study the process shown. The file can be stored on a classroom computer or online for viewing at any time. Document cameras are used by the Diesel Technology and Machine Tool Technology programs. The cameras can render objects as 3-D interactive models. These are utilized in preparing for 3-D printing as well as other learning activities.



Students appreciate the opportunities to work with simulators. The chart to the left reflects the responses of the participants in the student focus group with the darker sticky notes reflecting how well they liked the simulators and the lighter sticky notes reflecting their perspective of how they affected their learning. The Machine Tool students really like the simulators because they can test their

skills before working on an expensive machine. While focus group participants believe that simulators are not as good as the real thing, they find them useful in seeing how classroom learning applies to equipment. The simulators help to prepare them for working on the real equipment without the pressure of potentially ruining the actual equipment. A focus group, made up of twelve students who represented the various CTE programs, was asked about how they felt about the use of simulators in the classroom and how their use has impacted their learning. None of the respondents indicated that they disliked the use of simulators and all of those who had used simulators believed it helped their learning.

Using Web-Based Resources to Teach

Blackboard is the learning management system (LMS) that is in place at NWCCD. Blackboard is a tool that allows instructors to add resources for students to access online. It is a way to provide students information such as syllabi, assignments, and grades. It can also be used to share course content with students. Prior to the Pathway to Success project, two of the CTE instructors utilized Blackboard. Training in Blackboard Basics, how to web-enhance courses, and creating robust assessment activities online was provided for instructors in the fall of 2014 with additional training on advanced features of Blackboard provided in the spring of 2015. These were followed up with open lab times in which faculty and staff could receive one-on-one assistance with the technology.

At the time of the evaluation visit, the number of CTE faculty who use Blackboard grew from just 2 to 12 faculty representing each of the CTE areas in the project. Blackboard is being utilized as an LMS within 43 separate CTE courses and 22 of those are utilizing the gradebook within the LMS. There are no CTE instructors utilizing YouSeeU at this time. Diesel Technology and Industrial Electrical Technology have used Camtasia to develop interactive videos to support

student learning. Machine Tool Technology has used Softchalk to develop interactive digital learning materials. These course components are delivered through the Blackboard LMS.

A greater number of technology tools are being utilized to teach. Amatrol resources have been integrated into 14 different courses in the Diesel Technology, Industrial Electrical Technology, Machine Tool Technology, and Construction Apprenticeship programs. Faculty indicate that they appreciate having quality pre-developed resources that they can integrate into their instruction. Other technology tools that are being used among CTE instructors include PowerPoint, Web Links, videos, and document cameras to enhance instruction and student learning. The Industrial Electrical Technology program integrated the use of Collaborate within one of the courses. As a result, 34 CTE courses have been web-enhanced, 8 CTE courses have been redeveloped to be hybrid courses where part of the content is offered online and part of the content is offered in a face-to-face environment, and 3 courses have been developed for online delivery.

Faculty Perspectives of Web-Based Instruction

Faculty generally believes that it is important to use technology in the classroom. In the trades and CTE fields, it is critical that students develop muscle memory in developing their skills. Much of that happens in the labs, on the job, or in field based experiences such as coops and internships. However, faculty believes that offering some components online allows slower learners more time to learn bookwork without pressures of time constrictions. Providing students with access to quality YouTube videos and other web-based learning materials places the responsibility for learning in students' hands. There are some quality resources available through NCCER that may be used. Instructors indicate that they have seen improved participation and interaction in the classroom using various types of technology. The adjunct faculty indicated that they would like to take advantage of the training provided and learn more about using technology in the classroom and developing web-based instruction. They believe that online instruction would help them to expand their service area to include apprentices in other parts of the state.

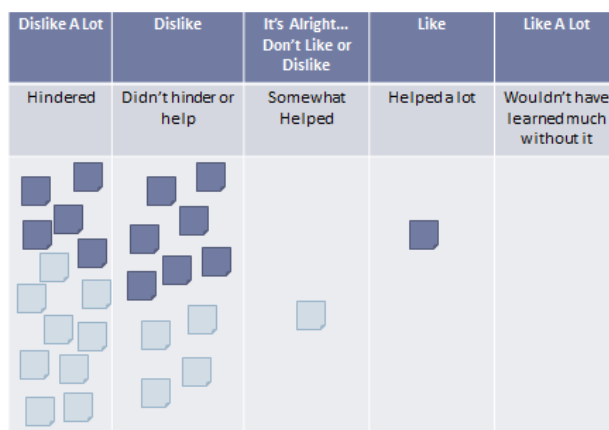
While there were some good experiences, there were also some challenges. Offering courses online or as hybrid courses is relatively new for CTE instructors at NWCCD. Instructors who taught online or hybrid classes indicated that the experience impacted their face to face teaching strategies. The experience also taught them more about teaching and learning online or in a hybrid format. One instructor indicated that he didn't allow enough time for hands-on activities in his hybrid course and so is planning to redesign it for the next time he teaches it. Instructors have found that it is easier to develop teaching materials for face-to-face instruction than online materials because you can develop it as you go. Online course materials need to be fully developed prior to the class beginning. The technology itself is a challenge for some.

Faculty indicated that delivering courses in a hybrid format is effective even though students say they don't prefer it. Flipping the classrooms using web-enhanced courses or a blended approach sparks discussion that is difficult to harness online. They believe that offering some

courses online such as applied math or reading may be of value students. Instructors expressed concern over having continual instructional design and technical support as they continue to grow in their technology use and application in the classroom. They said that the portal is difficult to use. In addition to learning how to better use the technology, their time is limited by the lab requirements. Labs schedules are calculated at a 2:1 lab time versus credit hour. So, every lab credit constitutes two hours rather than one hour of contact time with students. Couple that with limited web access in the building and it adds to the challenge.

Student Perspectives of Web-Based Instruction

Students had challenges with the technology. The chart to the right reflects the responses of the participants in the student focus group with respect to the use of Blackboard. The darker sticky notes reflect their responses to how well they liked Blackboard and the lighter sticky notes reflect their perspectives of how it affected their learning. Students in the focus group indicated that Blackboard is difficult for them to navigate and some students were very frustrated with it. All but one of the focus



group participants indicated that they dislike using Blackboard and 9 of the 13 respondents indicated that it actually hindered their learning. One respondent indicated that they like using Blackboard and one said that it somewhat helped their learning. They said that Blackboard is complicated to use and it sometimes didn't work. Students would like to use Blackboard to access grades, monitor due dates, and upload assignments, but that the information in the system needs to be kept up to date. Some of their instructors do not keep their Blackboard shell up to date with current information.

Many of the students in the focus group don't have computers or Internet access at home and have to use the computers available in the CTE building to access Blackboard. The computers in that building are very old and very slow. It can take a significant amount of time to just boot them up. In addition, the CTE building has very limited and unreliable Internet access. Even if they do bring their own laptop or other wireless device, students can't access web-based resources within the CTE building. Instructors also indicated a frustration with the lack of up-to-date technology in that building.

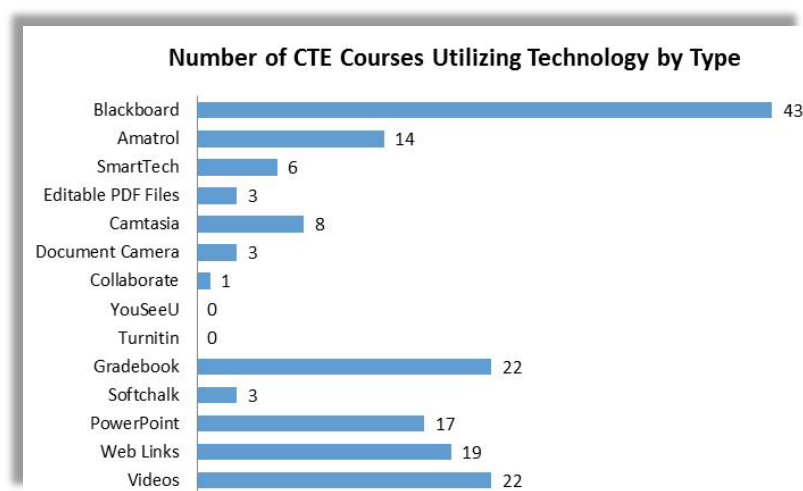
Students indicated dissatisfaction with hybrid and online courses, which supports what instructors said. This is consistent with data from student surveys administered by the project. Of respondents to the surveys, only 2% of the responses indicated a preference for taking courses online, and those were mostly general education courses. Sixty percent of the responses indicate preference for taking the courses in a face-to-face environment. According to focus group responses, apart from not always having ready access to the Internet, they indicated that

they feel a little cheated that they don't see the instructor as much. Instructor involvement in the online portion of the hybrid course is not evident to them. They don't like not being able to ask questions while they are working. Students don't equate online courses with a real teacher. Students feel that online courses are inappropriate for a hands-on trade.

FACULTY SUPPORT IN ONLINE AND TECHNOLOGY-ENABLED LEARNING

During the first part of the project, two instructional designers were hired to help faculty better understand how to use technology in the classroom and to build online course components. The project began by surveying faculty about what technology they already use and what they would like to learn more about. Based on this information, training sessions were developed to meet the needs and interests of the faculty. Seventeen training sessions were offered in the fall and another 17 were offered in the spring. The fall trainings were focused on offering faculty a smorgasbord of trainings to expose them to various technologies available to them. The fall trainings were supported by the executive team and were well attended. There were only five CTE instructors who did not attend training.

Spring trainings were more focused on developing learning materials using the technology. This included designing web-enhanced, online, and hybrid courses. Every faculty who developed a web-enhanced, online, or hybrid course signed a Memorandum of Agreement (MOU) and received compensation for completing the development of the course. The spring trainings were not as well attended because there were competing required meetings that were scheduled at the same time as the training sessions. Faculty was required to attend the other meetings and was not able to attend the technology trainings. However, there were 43 courses developed using the technology taught in the training sessions.



The chart on the left shows the number of courses that utilize each type of technology. Instructional designers very much contributed toward faculty being able to develop the courses. Instructors indicated that they would have floundered without the instructional design help. The instructional designers did the technology “legwork” for them by troubleshooting

issues they had and formatting the courses for them. Immediate help was provided as needed. This was extremely valuable to them given the limited planning time they had available. It is important to them that instructional design support is available to them as they move forward to revise existing coursework and develop new web-enhanced, hybrid, or online courses.

EXPANSION OF CREDIT FOR PRIOR LEARNING TARGETING VETERANS

The Pathway to Success project is building upon the progress made in its first round TAACCCT consortium project with regard to Credit for Prior Learning (CPL). Strides were made regarding expanding CPL opportunities to students at NWCCD. This project is working toward further evolution of CPL with a focus on military training and non-credit short course articulation to credit, which can be directly applicable to apprenticeship programs. There is another effort in the project that includes expanding credit for non-credit short courses. The project is considering a focus on heavy equipment operators to test the process.

One strategy that has been attempted is portfolio assessment. The process for developing the portfolio is overwhelming for students and the review process is cumbersome for faculty. In its current form, it is not a process that is likely to be utilized. The college has expanded the types of tests that are approved to be used for earning CPL. The Diesel Technology program is planning to use Amatrol to test competencies for which students may earn CPL. In the Construction program, a student who has a Level 3 Apprenticeship plus 500 hours can count that toward an AAS. Electrical credits for prior learning must be approved through the state.

Military Credit for Prior Learning

Military credit for prior learning (MCPL) has been a focus of this project. NWCCD would like to be recognized as a leader in MCPL. The standard credit awarded to veterans is two physical education credits. Preliminary data suggests that military veterans who receive MCPL, even just the two credits, have stronger completion outcomes than those who do not receive MCPL at NWCCD. However, it has been difficult to expand beyond just the two credits. Faculty is responsible for approving or disapproving credit for prior learning. They are tasked with ensuring the rigor of the coursework that they accept is congruent with the rigor of the coursework they offer. Because military transcripts offer little descriptive information, faculty may not be confident in accepting the credit. The American Council on Education (ACE), a nationally recognized resource for credit options, provides a list of recommended military trainings that may transfer for credit in particular areas. However, these recommendations do not include the objectives from the military trainings because military courses are proprietary so faculty is reluctant to accept them on face value. This has somewhat stalled the process.

One student who was a veteran suggested that the veteran be invited to review the transcripts with the faculty responsible for approving the credits. The veteran can explain the training classes as well as any other experience relevant to that field of study. Industry partners also see the value of expanding MCPL. Veterans tend to be dedicated students and excellent employees. Employers that were interviewed believe that expanding CPL, whether for military or otherwise, may help people who have worked in an industry gain a degree toward earning promotions. When prospective students see that they have a head start on the credits they need for a degree or certificate, they tend to be motivated to work toward earning that degree or

certificate. In addition, they believe that it may help industry people become qualified to teach. There are people in the field who may want to slow down and give back by teaching.

CPL for Non-Credit Short Courses

NWCCD is exploring ways to expand CPL to include short courses and training activities that are typically offered as non-credit or continuing education. Potential sources include heavy equipment operations as well as offering an interactive web-based training simulation system for technical training. The technical training would be offered as a service to industry partners as a resource for their current employees.

PROGRESS TOWARD PROJECT TARGETS

The Pathway to Success project is in its second year of a four year project. It is progressing well in terms of enrollment, credit completion, and retention. It is too early to report program completion or employment information. However, there is a possibility that some of the information may be underreported as of the time of the visit. Not all of the CTE students were documented as project participants. The project has taken steps toward ensuring that all of the CTE students had formally agreed to participate in the project.

Table 1: Progress toward State Project Outputs

	<u>Target</u>	<u>Progress</u>	<u>% Toward Target</u>
Participants Served	436	99	23%
Participants Complete Credits	436	93	21%
Participants Complete Programs	370	0	NA
Participants Earn Credentials	111	0	NA
Participants Retained in Training	66	93	NA
Participants Employed	237		
Participants retained in Employment	226		
Incumbent Workers Increase Wages	135		

There are other data elements that will be important to track with regard to measuring the effectiveness of project strategies and reporting outcomes. Student demographics such as veteran and disability status need to be tracked so that impacts can consider these facets. Employment and earnings at the time of enrollment will help the project determine if the project has impacted those aspects. There needs to be greater collaboration between the project Data Support Specialist and the project personnel to ensure that the data continues to be tracked in a way that makes data analysis and progress reporting possible.

GENERAL STAKEHOLDER PERSPECTIVES

During the interviews and focus groups, each group was asked about their general perspectives of the project and the programs they in which they were involved. In addition, stakeholders

were asked to complete the open statement, "If there was one thing I would like to know, it would be..." Following is a brief discussion of those comments.

STUDENTS

Overall, students enjoy the programs in which they are enrolled. They like working with their hands and seeing completed projects and the work that they've done. Students like applying what they learn right away in the lab. Some instructors hold supervised open shop hours in which students can come and practice their skills. Students value on-the-job training and onsite training where they can work in authentic situations. They talked about how they work together working as a team and helping each other. They very much enjoy the competition at Skills USA, too.

Students expressed some things they didn't like, which had mostly to do with financing their education. They were frustrated with the expense of the books and the low reimbursement they receive with they try to sell them back to the bookstore. They would like assistance with the cost of materials they need, since tools are so expensive. They don't like paying institutional fees for coop experiences.

In terms of environment, students would like to have more machines to work on in the labs. And they would like to have a bigger space for diesel technology classes because space is limited, especially when they have to share space with evening classes. They would also like to have reliable and fast Internet and computer resources in the CTE building.

INSTRUCTORS

Instructors at NWCCD are generally very pleased with the direction that the college is taking. The project is providing opportunities to learn more about how to use technology to better reach their students. They understand that it is a process that takes time and that there are limited resources. Overall, they feel that NWCCD is a great place to work. It is a warm family atmosphere.

EMPLOYERS AND INDUSTRY PARTNERS

Employers are integral to the operations of the CTE programs at NWCCD. They are invested and committed to the colleges and the programs they serve through advisory boards and other means. They believe that the college has highly qualified CTE faculty. In terms of recruitment, they believe that the programs would benefit from embedding a process to qualify students for their respective career training programs in the recruitment process. Employers indicate that students need basic math and science skills. They stress the critical need for more skilled workers to meet their workforce demands. Not having enough skilled workers can cripple their ability to keep their businesses strong and/or to grow their businesses. They appreciate that students learn on current technology such as CNC. Employers indicated that instructors need to stay current on industry technology and directions in much the same way they do through

attending industry conferences and trade shows. On a side note, one contractor who also teaches at the college said, “This has been one of my favorite places to work...it’s like a family here.” He would very much like the relationship with the college to continue to grow.

CLOSING COMMENTS

SUMMARY

Overall, the project activities are coming along according to schedule. All of the equipment has been acquired and is in the process of being installed. Faculty training has been conducted with a result of increased technology use. Faculty value the use of simulators in the classroom. Instructors are trying new technologies and course delivery methods, which requires technical and instructional design support if it is to be sustained and/or expanded. This is true for any substantial change. Adjunct faculty would like training in how to use Blackboard and other web-based technology. Instructors need to think differently about time management, course content, and student engagement when teaching online or hybrid as compared to teaching in a face-to-face environment. This is important feel the presence on instructors regardless of environment. Instructional design must balance web-based instruction with hands-on.

Students see the value of Blackboard for communication and to submit assignments. Limited access to the Internet is a frustration. Blackboard is viewed by students as unreliable, both in terms of technology and in terms of updated information provided by instructors. One student shared an experience about how the system was down and he had difficulty making the deadline for uploading an assignment. Another expressed frustration that the information was not updated by the instructor on a consistent basis. Moving to a new technology takes coaching and support.

The Advising/Coaching process for CTE students in in the development stages and is happening according to the projected timeline. Although challenges have been identified, CPL and MCPL have grown and are being expanded.

The CTE programs at NWCCD are one big happy family. Industry partnerships are leveraged in significant ways. Employers help teach, guide programming, facilitate authentic learning experiences, recruit students, and hire graduates. Faculty and employers work together to ensure that students are well prepared for their fields.

RECOMMENDATIONS

Following are some recommendations based on the information gathered:

- Continue to develop the concept of Decentralized and Specialized Advising for CTE, including support for women in CTE.
- Provide support for Advisor/Coach to access CTE students at Gillette College.

- Provide ongoing intentional instructional design and technical support for online and web-based teaching and learning needs support at all levels of the institution.
- Provide continuing support for faculty use of technology to teach both in the classroom and online, whether hybrid or online.
- Improve Internet access at the CTE Building on the Sheridan campus.
- Clearly define a process for documenting project required data.
- Hold regular and formal project personnel meetings that include an agenda and meeting minutes.

EVALUATION LIMITATIONS

Some limitations in this evaluation exist:

- Students in the focus group were only from Sheridan College and not from Gillette College. It would have been more insightful to speak with students from both colleges.
- Focus groups provide insight and a group perspective. Because the discussion of online courses was a sort of “hot topic” individual views may have been influenced by the group overall even though individual responses were elicited in writing prior to discussion.
- Instructors at Sheridan College were more thoroughly interviewed than those at Gillette College. Future visits should be more inclusive of both campuses to help ensure equal voice is provided to the project for evaluation purposes.

EVALUATORS

Northern Wyoming Community College District contracted with Dr. Leah Woodke of Woodke360 Consulting to conduct an external evaluation of the TAACCCT Round 3 grant project, Pathway to Success. Dr. Woodke, President of Woodke360, has almost 30 years of experience in education ranging from early childhood to higher education; 12 of those years were in higher education. She has extensive background working with federal grant programs, particularly those funded by US Department of Education and US Department of Labor. She is an experienced project consultant and evaluator who has worked with organizations in the private, public and tribal sectors. Dr. Woodke holds a Master of Education degree in Educational Leadership and a PhD in Education with a focus on instructional design for online learning. Woodke360 has partnered with Larry Graf of Westwood Research & Statistical Services to provide statistical data services as well as research assistance.

The goal of the external evaluation is to evaluate the project's implementation and its progress toward stated outcomes. Dr. Woodke and Mr. Graf visited the Northern Wyoming Community College District campuses and conducted interviews with administrators, faculty, students, key personnel, and other staff members. They also reviewed the relevant documents and related reports.

