Colorado Helps Advanced Manufacturing Program

Lamar Community College Case Study

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RUTGERS
Education and Employment Research Center

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INTRODUCTION

The Colorado Helps Advanced Manufacturing Project (CHAMP) is a United States Department of Labor (USDOL) Trade Adjustment Assistance Community College and Career Training (TAACCCT)-funded grant project intended to develop new or redesigned online and hybrid courses leading to credentials in advanced manufacturing in high demand fields across the state of Colorado. The Colorado schools involved in CHAMP are a consortium of eight of the state's community colleges and one four-year institution: Front Range Community College (FRCC), Pueblo Community College (PCC), Red Rocks Community College (RRCC), Lamar Community College (LCC), Pikes Peak Community College (PPCC), Aims Community College (Aims), Community College of Denver (CCD), Emily Griffith Technical College (EGTC), and the Metropolitan State University of Denver (MSU Denver).

Prior to the development of CHAMP, the Colorado Advanced Manufacturing Alliance identified two gaps in the state's existing academic training programs that had been previously designed to meet the needs of the industry: 1) the lack of a consistent voice representing the needs of industry to the academic community and 2) the absence of a strong network to facilitate business-to-business activity partnerships with educational institutions. The CHAMP project was conceived to address these issues with the larger goal of making Denver and the state of Colorado a leading advanced manufacturing hub.

CHAMP is in place to increase the attainment of degrees and certifications in manufacturing in order to best serve employers' needs. In service of the market-oriented end of this goal, its programs are designed to produce 21st-century workers whose skills align to local market trends—community colleges work with local employers to align their programs with industry-recognized skills and competencies. With regard to increasing the number of graduates entering the market, CHAMP is focused on creating innovative and flexible learning opportunities for students. The grant calls for schools' existing courses to be adapted for hybrid delivery, for example, such that a portion of the traditional face-to-face instruction is replaced by web-based, online learning.

In addition to designing or redesigning advanced manufacturing programs to fit a hybrid model, each college is required to integrate open education resources (OER) into its CHAMP curriculum. OER are teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use and repurposing by others. OER may take the form of full courses, course materials, modules, textbooks, streaming videos, tests, software, or any other tools, materials, or techniques used to support access to knowledge. Under the CHAMP grant, consortium colleges are encouraged to use OER in the creation or redesign of online or hybrid courses and are also required to create or redesign their courses and programs such that they can be packaged and licensed as OER for use by other educators and institutions. Thus, staff at CHAMP colleges will package, license, and post their course materials during the course of the grant.

Each college in the consortium is also required to employ at least one CHAMP navigator to collaborate with employer–partners, local workforce centers, community and nonprofit organizations, and students to ensure students' access to CHAMP resources and facilitate their success. Within each of these areas of collaboration, navigators work according to their institution's needs to build CHAMP programs, recruit and retain students for CHAMP programs, and assist those students as necessary. Navigators track their interactions with CHAMP students to report outcomes based on a model of *intensive advising*, which involves multiple interactions and points of intervention with each student throughout his or her education to ensure each student's success and, ultimately, employment.

Aside from these institution-specific innovations, consortium-level outputs are also to be integrated within each college. These include massive open education courses (MOOCs) and a new credit-for-prior-learning process. Three MOOCs were created at the consortium level: a math MOOC, a student success/employability MOOC, and a credit-for-prior-learning MOOC. Each college is encouraged to include one or more of the MOOCs in its program or institutional curriculum. The process at each college for awarding students credit for prior learning will also be redesigned at each college according to policies developed by the consortium.

This report is one of nine created to highlight each individual college's contributions to the CHAMP project at year two of the grant. The purpose of this case study is to identify the implementation processes utilized by LCC and to provide a summary of the LCC CHAMP team's activities, successes, and challenges to date. This case study begins with an overview of its methodology and data sources and then moves on to the contextual frame—demographic and socioeconomic background information about LCC, its student population, and its service region. These sections are followed by a summary of the goals of LCC's CHAMP program; a discussion of the implementation of the program, including the design process and its incorporation of OER; a look at student and faculty perceptions of the program; an examination of employer and workforce center collaborations; a discussion of the CHAMP navigator position as it has developed at LCC; an examination of the college's approach to redesigning its credit-for-prior-learning options and processes; and a summary of successes, challenges to date, and recommendations for next steps.

METHODOLOGY/DATA SOURCES

This report examines the development and implementation of the first two years of the CHAMP grant at LCC, including experiences of the project team members and participating staff, faculty, and students. As such, this report uses qualitative data and analysis. Subsequent EERC evaluation reports will include outcome measures and report on quantitative data collection and analysis.

The qualitative methodology for this report includes content analysis of consortium goals and activities to date, relevant proposals, and project- and college-specific statements of work, quarterly reports, and websites developed by individual colleges. EERC team members also

conducted phone and in-person interviews with college project leads, staff, faculty, navigators, and students.

Most interviews were taped and transcribed; non-taped interviews involved extensive note taking. These transcriptions and notes as well as the documents cited above have been coded through the use of NVivo qualitative data management software and analyzed by EERC team members to represent each college's individual story relative to the CHAMP project.

As noted above, while quantitative analysis will be presented in subsequent reports, this summary is meant for contextual purposes only and will only utilize data from qualitative analysis. For this reason, grant targets relative to each college, student counts, course counts, industry- and workforce-related targets, and other quantitative objectives will not be discussed as part of this report.

COLLEGE DESCRIPTION AND OVERVIEW OF STUDENT POPULATION

LCC is located in rural southeast Colorado. The school offers multiple occupational and degree programs focused on agriculture and farming, allied health, and historic preservation, as well as other transferable and industry-specific programs such as criminal justice. The college also has an exemplary athletic program which attracts athletes from outside the area. About 900 students attend LCC annually, making it the smallest school in the Colorado Community College System (CCCS). The student to faculty ratio is approximately 19 to 1. LCC's retention rates and graduation rates have consistently been above the state average.

LCC'S CHAMP GOALS

LCC's primary goal for CHAMP was to redesign and expand their welding program. The school's vice president referred to this as "streamlining" the program and reinventing it as a standalone entity. Prior to CHAMP, welding at LCC was listed under the umbrella of construction technologies. At that time, welding contained one certificate that could ultimately lead to an Associate of Applied Science degree (AAS) in construction technologies. Goals for the new program included separating it from the construction technologies program and building in three stackable welding certificates: basic, intermediate, and advanced. These can be taken independently or stacked and applied toward an AAS in welding, which allows students to choose the level of education that is most appropriate for their circumstances.

In addition to this goal, the program was to be redesigned in a hybrid format, allowing students more time for hands-on learning. Prior to CHAMP, the welding program was taught as a series of 'traditional' classes with classroom-based lecture and textbook study followed by 'lab time' which gave students time in the shop to practice their skills. A primary goal of CHAMP was to redesign the program following a 'flipped classroom' model which replaces classroom lectures and textbook reading with online instruction.

As an institution, one of LCC's overarching goals is to maintain an industry focus for all of the school's programs. Administration at the school encourages faculty and staff to remain keenly aware of the needs and wants of industry. They encourage instructors and staff to constantly consider what industry is doing and how the school can be innovative and serve industry's needs. The college encourages change to keep up with industry needs. As one staff member stated, "We know that if we sit here and offer something as we did ten years ago – that's not going to meet industry needs." Changing to meet industry needs allows the college to grow and expand: "The best opportunity for growth for Lamar is to take programs like welding that are good for us and try and figure out a way to expand the reach a little bit." One administrator stated that the school "had a prior interest in [transitioning programs to] hybrid, [which was] driven from the top level because industry is really moving more in that direction." The VP for Student Services noted, "our population's changing and our competition is offering [classes] online. We needed to move forward with something that would take us where the students are." The CHAMP grant was an excellent opportunity for LCC to expand and grow the welding program by increasing its reach through the hybridized format.

The expansion and redesign of the CHAMP-impacted welding program is extremely timely given the field's projected growth. According to the USDOL, the number of jobs in welding, cutting, and soldering is expected to grow by 15 percent by 2020[1]. This is especially pertinent to Colorado, experiencing a return of manufacturing jobs which the state has had difficulty filling due to a shortage of trained employees. The Bureau of Labor and Statistics reported that in 2014 the median wage for a welder in Colorado was $19.40 per hour. This is higher than the national average of $17.99 per hour and highlights the value of this career path for state residents.[2]

IMPLEMENTATION

LCC's rate of implementation has been impressive. The vice president of student services noted that CHAMP staff members' efforts were especially laudable in light of programmatic realities at the beginning of the grant term. The welding program was already in flux as a result of a move and shop upgrade that were planned prior to CHAMP. Referring to the welding program the VP noted: "They changed buildings and got a new welding shop during this time and handled all of that very well." Despite this hectic period, the CHAMP team was able to quickly begin executing on its goals for the welding program. One reason for LCC's early success was intense collaboration between the school's two co-project leads, the welding program's full-time instructor, the program's adjunct instructor, and the CCCS instructional design team, available to all consortium colleges, to assist with the conversion of curriculum.

[1] USA Today (2012). Shortage of welders sparks interest in training. Retrieved on December 17, 2015 from: http://www.usatoday.com/story/money/business/2012/10/21/welders-shortage/1641073/

[2] Bureau of Labor and Statistics. (May 2014). May 2014 State Occupational Employment and Wage Estimates Colorado. Retrieved on January 2, 2016 from: http://www.bls.gov/oes/current/oes_co.htm

Design/Redesign Process

CHAMP staff planned to divide the pre-existing welding program into three stackable certificates that would ultimately lead to an AAS in welding. This required extensive curriculum development in order to properly separate the program into basic, intermediate, and advanced certificate levels. LCC's vice president explained this by stating:

> The challenge was to make sure that everything fit where we put it...that [students] were really building skill on top of skill in order to get to [the advanced welding certificate]...when you're looking at curriculum and you're designing curriculum you want the students to be able to perform in the workforce at the level that they're certified at.

To meet this goal, the program's sole full-time instructor used his own industry experience to determine which welding processes were best for each level.

In addition to faculty input, CHAMP staff wanted to include employer input on the new stackable program. Since the advisory board historically had low industry attendance, CHAMP staff decided to host a community roundtable event, which was well attended and very beneficial to the school. Employers discussed what type of employees they were looking for, and what technical as well as soft skills those employees should have. One project lead stated: "The roundtable was a chance for employers to say what kind job openings they had, and what they wanted to see in those employees." The result of the event was a compilation of employer needs such as: soft skills, basic math, basic computer skills, blueprint reading skills, and the ability to follow directions. The CHAMP navigator also fielded a survey to local employers, in which she asked them "what skills are critical to you?" Employers responded that math, the ability to follow to instructions, the ability to show up on time (dependability) and the willingness to cross-train all ranked very high as critical skills for the workplace. CHAMP staff worked diligently to incorporate these skills into the program, and also developed an orientation session for students entering the program which highlights employability skills as key to success.

A total of 40 courses were designed or redesigned in order to fit the new multi-layered program. LCC's full-time faculty member prepared five courses; the other 35 courses were created by faculty members at other consortium institutions. For the five courses prepared by LCC, the full-time faculty member worked through the summer to map the courses, make decisions about course content, and find and create elements to incorporate that could be licensed as OER. He collaborated with both CHAMP project leads and the instructional design team at CCCS. As a result of staff dedication and collaboration, the course redesign occurred rapidly, and LCC was able to roll out its new welding courses by fall of 2014.

Hybridization

Simultaneous with the program redesign to accommodate three stackable certificates and an AAS, welding courses also transitioned to a hybrid format—a combination of hands-on and online learning. The full-time faculty member tasked with this process had no prior experience with online teaching, converting course material, utilizing technology in teaching, or the school's Desire2Learn (D2L) platform.

As such, the instructor had to learn new tools and technology involved in delivering the courses in a hybrid format as well as how instruction would change when material was put online. LCC's two project leads were instrumental in helping the full-time faculty member get "up to speed" at a fast pace. One project lead was responsible for the administrative aspects as well as learning more about how to support instructors with online tools and the D2L platform. This way she was eventually able to take over some of the responsibilities from the system's instructional design team. This also cut down on time; if the instructor needed assistance with something that she could help out with, it eliminated time spent waiting for the system's team to help.

The other CHAMP project lead at the college came from a background in training faculty in higher education and currently teaches education courses. Because of this, he was able to help with some of the pedagogical-related issues relative to converting materials and teaching online. Both the full-time and adjunct welding instructors have backgrounds in welding; they are not trained teachers. As the instructor said:

> I was kind of confused and lost as far as the computer's concerned for the D2L and Banner and all of the programs that we use here. And [the project lead] took me aside and set me at ease, and he says, "Listen. All you need to do is teach these guys how to weld because we will teach you how to teach."

In addition to the institutional collaboration during the redesign process, collaboration at the consortium level was also instrumental in LCC's early implementation. CCCS's instructional design team offered LCC's full-time instructor assistance regarding what should be placed online and what belonged in the classroom for each certificate level. While they did not directly make these decisions, they did help the faculty member think through what elements of his course would fit better in an online format and which were better left in the classroom. The team also assisted the instructor in choosing technology tools that would help facilitate teaching and learning. One member of the system's instructional design team described the process as providing guidance, trouble-shooting, and giving LCC the necessary tools needed to succeed. He said their job is "about guidance and a resource to use for help."

Collaboration between the instructors, the project leads, and the system-level instructional designers helped LCC roll out their courses early in the grant process. In fact, LCC's willingness to cooperate and seek assistance was noted by several CHAMP staff members. One consortium

instructional designer commented that, "[the instructor] was very willing and open to get any sort of help we could offer." He "is really out to do what's best for the student and to be able to continue to improve as an instructor and continue to improve his program."

Another way consortium-level collaboration was evident in LCC's program redesign was through the support of consortium members at other schools. LCC's full-time faculty member found the help to be indispensable:

> I'll tell you what really helped was having the support of the people from the system in the other programs. So whenever you talk about the consortium, that's one of the strengths. Because then it's not just you isolated trying to do things. We had trainings, met, and learned from each other. That helped [me] turn the corner to be able to provide curriculum in an online environment.

As a result of the early roll-out of the program, the school has been able to troubleshoot and strengthen the courses over time. For example, the project lead noted that:

> [The instructors] noticed that the online content was not connecting with the classroom [material] so students just weren't doing it. This was a problem with the first cohort. [Since then], they have gone in and tried to make a stronger connection between the online and the in-class material.

As such, the school has had time to beta-test the courses and make changes as needed. Other changes made to the courses include a modified format for the gradebook, the addition of employability skills integrated into the courses, and frequent checks to be sure students are completing home assignments. Students are also now required to complete their online reading assessments prior to showing up for shop time, as well. Instructors have increased the "rigor put toward the online piece" and stress to students that there "is no classroom time"—they come to campus for shop time, and must complete all of their reading and assignments ahead of time.

Because LCC was able to launch its program so quickly, CHAMP staff members are already planning sustainability options. In fact, the school is already thinking about how to better message its online content to students so that hybridization becomes an additional selling point. One CHAMP staff member stated:

> Having the program has given us another marketing venue. It's a little niche with welding in this area. And…it's been a fit, so I think there is a buzz, if you will, out there in our surrounding area and in our community, even at the system level. And that's always good for a small college to have things that promotes us. It says we're able to put this together and that we have an excellent program. And that never hurts. That's a resource. Anytime…you're able to put together a new program and be able to fill it the way we filled it; that says something for us.

One CHAMP staff member noted that they also plan to frame the time students spend at home online as an experience that mimics the welding workforce. The staff member explained that welders often do blueprint reading at home, increasingly online. This is part of the institution's drive to fully prepare students for the workforce.

Open Educational Resources

Another element in redesigning courses for the program was the incorporation of OER. The system instructional designers find that often instructors rely heavily on textbooks and proprietary material. To create OER content, however, the instructor has to create content-specific material in line with the learning objectives being taught and then add it to the online platform. LCC's primary welding faculty member at first felt he didn't know where to start with the process. With the help of the system instructional design team, however, he was able to understand the process and adapt resources to his courses. Visualizing OER content as a tool similar to a textbook or computer program helped him create material contextualized to his classroom and student population.

Also, it is imperative for instructors to understand that when they build a hybrid or online course, they can still use some proprietary materials and textbook content; in the CHAMP grant, the scope of work requires 80 percent of the course material be OER—the other 20 percent can be proprietary. But elements of the course that are better suited to the online platform can be converted to OER and put online. For LCC's welding instructor, there was a great benefit to putting reading with quiz assessments online—this decreased the time he spent with students in the classroom every day and increased the amount of time they could spend in the welding lab.

STUDENT PERCEPTIONS OF PROGRAM

Current students in the LCC's welding program are overall very happy about the courses and are enthusiastic about the material they are learning. They are also positive about the hybrid coursework. One student told EERC team members: "I like it. I think it's convenient…I can just take it home. I have it. I can do it on my own time." This student also said: "It's turned in automatically. In case you forget it at home or something," meaning that the auto-submission of quizzes and homework assignments saves on the potential stress of forgetting an assignment at home. Another student said he "really likes it" because "it gives us more time in the shop." Several students also noted that the decreased classroom time gave them more flexibility to work or take care of home—or family farm—responsibilities. One student was glad that she was able to do her online work "at midnight if [I] have to" because she had more time to work on her family's farm. Another student noted, "if I had to go [to campus] any more day[s], I don't know if my job would really work with me on it because they were skeptical about [me] working [while attending class two days a week].

Aside from these benefits, most students also recognize that even welders need computer skills to successfully find and maintain employment. Other benefits students recognized were the decreased time to certificate, more shop time, and more in-depth training time with the instructor. One student said "my favorite part [of the program] is welding;" therefore he liked just being able to get the reading "out of the way."

During the first semester (the initial run of the redesigned program), however, students were resistant to the incorporation of online material. Staff suggested that students may have even been trying to undermine the program because they were more comfortable with 'traditional' classroom-based learning. However, as expected, newer cohorts are adapting well to online learning. Current students were not part of the program before the redesign and are therefore more receptive. One instructor noted:

> This semester these students don't know—it's not new to them. For all they know it's always been this way and it's business as usual. These students are also open to [learning] online. There's a big difference in these students than those last time.

While one student did mention his consternation over broken links in the online system, current students had a positive perception of the program overall including the hybrid component. Students were also very happy with the hands-on nature of the lab. They enjoyed getting feedback from instructors and liked using classroom time to weld as opposed to reading chapters in a textbook while on campus.

Initially, CHAMP staff had some concern regarding the ability of a mostly rural student population to access online materials. Because of this, a computer lab was set up for students to use. However, both of the project leads and the welding instructors felt that most students were opting to complete their online content off campus. One CHAMP staff member commented that:

> Typically I think we believe that there is a lack of connectivity in the rural areas and that they are not able to do the adaptive technology as quickly as we are seeing in the urban environments. And I'm not sure that is the case.

Staff has found that many students also use their smartphones or tablets to connect to their coursework. One student did mention that he did not have internet because he lived too far out in the country. He noted that he had to come to the computer lab to do his work, but did not mind because he was able to just "spend an hour and a half and get all of my homework done for the week."

Regarding the creation of stackable certificates, students believe the certificates are useful and desirable to employers. They like the idea of being able to receive a certificate virtually every semester. This option is especially helpful for students who are employed while attending classes; one student said "every semester you get a certification in something that you [can]

present [to the employer]." The certification "steps" also make it easier for students to visualize themselves going farther in the program. Nearly all of the basic certification students EERC team members met with reported they were "aiming for" the advanced certification, even though they had just started the program. The instructors for the program said most of those students will likely end up in the associate's degree program because once they "get the bug," they "will go all the way."

FACULTY PERCEPTION OF PROGRAM

The welding program is run by one primary welding instructor with assistance from an adjunct. Both instructors have a background in welding rather than teaching and were completely new to online instruction. Prior to CHAMP, their teaching strategies were classroom and textbook-based. When introduced to the idea that their welding courses were about to be transitioned to a hybrid format, one instructor said "there was some grumbling," but they both just "took it in stride" and said "OK, let's do it." The full-time welding instructor did all of the course conversion for the five courses LCC provided. Because he lacked previous experience with the web-based platform and the process of converting teaching material to an online format, he relied heavily on the help and support of the system's instructional design team and CHAMP project staff at the college. One project lead noted that "despite [his] skepticism and doubt, he's been malleable and just completely on board with being willing to make changes." The faculty member found that just sitting down and working through the day-to-day lesson plans for his courses and trying to navigate the platform helped him immensely. Regarding his learning curve, he stated, "I had to do a day-to-day lesson plan for each class. It was...a lot of typing for a welder!"

Both instructors are extremely pleased regarding the outcome of the courses to date. One instructor said "I really like it. It's just like any other college course" now. Having the courses hybrid also "takes a lot of the 'grunt work' off [the instructor]," he feels, and has "made the education [for the students] more personal." He finds that when students do their reading outside of the classroom, they are able to "form an answer by the time they are able to see [the instructor] to ask a question." He feels that students in the current cohorts are able to better absorb the reading material, and he thinks this is a result of them reading the material on their own time. He states that "the more they [students] know about it [welding theory]…the quality of their welding goes up exponentially."

EMPLOYER COLLABORATION

Though welding is a growth field in Colorado at-large, LCC's local area is not very industrial. As such, LCC's employer outreach involves making connections outside the local community and encouraging students to be willing to move to another part of the state if necessary. The navigator noted:

> The good thing is that welders are in high demand, just not here. [But] students need to be willing to leave the area, which can be a challenge for those with families and those who many not have the income to travel to interviews.

The navigator feels that the college needs to do more work to establish relationships with local businesses because they have been more resistant than some of the large companies further away. Local businesses are not accustomed to a highly skilled workforce and are still becoming aware of the role that the college can play in creating a better prepared pool of job applicants. For the most part, employers rely on the instructors—members of the welding industry themselves—to send students their way. Also, since Lamar is such a small town, word-of-mouth advertising is generally the only way small local businesses seek out employees. Thus, the navigator or other staff at the college may not hear about an available position right away; as the navigator said, "it's not like you can just look at the job postings." In many cases, she finds confidence is the best seller. If students "can go in there and sell themselves and weld" then an employer may be inclined to hire an extra welder, even if they were not actively looking for one.

Aside from searching for potential employers for students, CHAMP staff also work with employers to find new students for the program, and to obtain employer feedback on the welding program. Employers have expressed the importance of incorporating of soft skills into welding courses to help prepare students for the expectations of full time work. As such, the welding instructors, with the help of the navigator, have created an "employability rating" that is counted as part of the students' course grade. The employability rating measures behaviors that are important in the workforce. They include showing up on time, staying on task, interacting well with other students, executing proper welds, not fighting, and not taking unexcused days off. LCC serves an at-risk population including former offenders and students who have not had previous success in the classroom or at work. Many are not aware of the behavioral expectations of the marketplace. One CHAMP staff member said the employability rating is beneficial for "helping instructors raise the level of expectation to meet what is necessary in the workforce." Reflecting on the need to prepare students for today's workforce one faculty member noted: "I'm trying to teach welders to be employed, not just train them to weld."

Internships

CHAMP staff has discussed how to help students gain real-life work experience prior to completion of the program. The navigator has concerns about the applicability of internship programs to a small, rural area: "Our immediate local businesses are more interested in hiring students straight out." She also noted that employers in the area would not bring on a student for an internship and not pay them: "It's just not the way they do business." CHAMP staff do not feel that internships are necessary for their students or for the employers in their area, but they do hope to have summer work experiences available for those students who want or need

it. This is something local employers will hopefully be more willing to participate in than internships.

WORKFORCE CENTER COLLABORATION

LCC had a good working relationship with their local workforce center prior to the CHAMP grant. Once the grant period began, the navigator started going to the workforce office once every week and typically spends about four hours there. She feels the time at the workforce center every week has helped her feel "more integrated into their process." At the time of the EERC site visit (October, 2015), the navigator was working with the two local workforce center employees to set up a program for the welding students to create their résumés, research jobs online, and submit job applications—all in one setting. One of the workforce center representatives was also coming into the classroom and spending about 15 minutes talking to students about the resources and services the workforce center could offer them.

Since the community is small, the resources the workforce center has to offer are limited. Because of this and the shift of national policy from the Workforce Investment Act (WIA) to the Workforce Innovation and Opportunities Act (WIOA), the local center has recently changed the parameters for who is eligible and what certificates count for eligibility. The navigator has since had to change the way courses are "bundled," as only the basic welding certificate or second year of an associate's degree can be counted as eligible. Therefore, instead of students entering straight into the associate's degree program, they are routed through the basic certificate first if they need funding.

The navigator says she doesn't see a whole lot of students who are receiving funding from the local workforce center, however. The community is small, which limits the numbers of people who apply. She stated: "I don't get that much activity from the workforce center, only because we're a small community and there aren't a lot of people coming in."

NAVIGATOR

LCC's navigator was previously hired as a career coach for the school's round one TAACCCT grant. She was hired toward the end of that grant period and transitioned from that role into her current role as navigator for CHAMP. Her familiarity with the TAACCCT process has helped make the transition smooth.

Background/Current work

The navigator has a background in counseling, which has served her well at the institution. Many students in the program are high-risk, and many of them need additional assistance beyond basic technical skills instruction. For example, the navigator mentioned some students recently released from prison who need help becoming workforce-ready. She also discussed some students who have been fighting addiction, who sometimes need someone to help them

"stay on track." In most cases she finds students just need the confidence to keep going. When students first come to see her with interest in the welding program, they are often shy and it takes them awhile "to open up." She goes over an intake form with each student, asking questions about their interest in the program, past education, work experience, and home responsibilities.

Once she determines they are a good fit for the welding program, she serves as an academic advisor, helping them create course schedules and making sure they understand the stackable certifications and potential career paths. Such advising was traditionally done informally by the welding instructor, but CHAMP has allowed the college to attempt to create a separate advisor role by incorporating it with the navigator role. One challenge with the implementation of this concept is student familiarity with the instructors. Students tend to ask questions of the welding instructors rather than the navigator. To make herself more visible to students, she visits the welding classes frequently. She sees her role "as working both with the students and with the instructors to make sure that we're being consistent in our message and moving them towards being employable." Other CHAMP staff members see the navigator role as indispensable to students. LCC's project coordinator said: "the trust level of students goes up as students interact more with the navigator." The navigator says she tells students that "the whole idea of me being in your life is for you to be successful. We want you to be successful and offer you every opportunity and every resource available to allow that to happen."

The navigator has also taken on the role of helping students navigate the online portions of the program. While some students have no trouble with computer skills or navigating online, others have had extreme difficulty: "I have a few who haven't been on computers. There are no skills there. I mean, we really have to start with how to turn the computer on." For this reason, she encourages students to come to her if they need extra help navigating the technology. She tells them: "you will need computer skills. This is the way the world is going." To help students acclimate to the faster pace and online elements of the program, the navigator and welding instructors plan to continue diligent follow-up with students to make sure they understand the online components and are staying on track.

MASSIVE ONLINE OPEN COURSES

CHAMP staff members feel the MOOC that most applies to their program and their students is the student success employability MOOC. One staff member stated she felt the credit for prior learning MOOC basically repeats the information from webinars and the committee meetings. Additionally, the math MOOC is not applicable to the welding students, staff feel. The student success MOOC, however, was initially seen as a potential fit for the program. However, once the navigator spent time going through the MOOC, she was not overly pleased with it and felt most of the information it supplied was already being applied in the program. Instead of having students do the MOOC modules as a whole, the navigator took elements of the modules and integrated them directly into the courses. She believes this makes students more likely to absorb the information because they can see how it relates to welding and employment in a welding

shop. The time management module has been the most useful so far. She reports she can "see the lightbulb go off" when students work through elements of the module. While the information is good, she believes it is better received by students when it is integrated into coursework, rather than available online through the MOOC.

CREDIT FOR PRIOR LEARNING

Historically at LCC, credit for prior learning has been done by College Level Examination Program (CLEP) testing. Portfolios have seldom been used in the past, and there was historically no policy or set process for portfolio assessment. The consortium-level changes in credit for prior learning policy is something LCC is looking forward to, especially for the four general education courses that are included in the CHAMP associate's degree in welding. For the most part, CHAMP staff members feel credit for prior learning will center on general education courses, not welding-specific courses. The school is still "looking into" what credit for prior learning will look like at LCC.

CONCLUSION

Creating stackable certificates and streamlining the welding program into its own standalone program has been a major focus for LCC through the CHAMP grant.

Creating new courses and integrating those prepared by other faculty members as seamless elements of a comprehensive hybrid welding program has been a major impetus driving the redesign of the program. CHAMP staff and administrators are incredibly proud of the program and its ability to fully train and prepare students for the workforce. Challenges to date as well as other successes are discussed briefly below.

Challenges to Date

Although LCC has been successful in transitioning the welding program to hybrid, the process has not been without challenges. Transitioning material to online content was "rather intimidating initially" but the full-time instructor reports his attitude was to "stick with it" and "figure it out." After the initial run of the newly redesigned program, he noted that "it's kind of hard to teach something when you're learning it at the same time." He believes the process has been beneficial and that the curriculum is much stronger as a result. Working through these challenges involved collaboration and everyone bringing their expertise to the table.

Some students' and instructors' frustration regarding the presence of broken links and incompatible material remains apparent. Courses with such challenges were created by other consortium schools and cannot be easily changed, which compounds the problem. LCC cannot make broad changes to courses designed by others without help from the system instructional designers. Also, welding programs are taught somewhat differently at each of the consortium schools. Therefore, although colleges are encouraged to use each other's courses, a high degree

of autonomy is still necessary. One instructor noted that "the customization that instructors feel is necessary can be a burden," since curriculum content has to be modified to fit LCC. Another instructor summed this up by saying: "the general scope of the program and courses is good, but details need to be tweaked." Likewise, courses are often tailored to fit specific equipment, and the school that designed the course may have equipment that LCC does not have. Often, tests and quizzes are tailored to pieces of equipment that do not exist at LCC. In these cases, the instructors have to modify, discard, or replace the equipment-specific course material. The burden of modifying so many courses has left the welding instructors feeling that although the concept of sharing courses seems like a good one, "in practice it's not, because teaching is specific to equipment," and the instructors "can't use equipment [we] don't have." The process of identifying and fixing broken links, eliminating material relative to equipment LCC does not have, and replacing it with relevant material has been time-consuming for CHAMP staff.

The navigator highlighted the school's enrollment of at-risk populations as a larger challenge, which the school is constantly working to address. Students that have been unsuccessful in prior educational settings tend to lack self-esteem in the classroom and may be unwilling to take a chance on something new. This barrier is especially apparent with regard to student interest in the AAS in welding. Few students want to carry on to the AAS, partly because they may be intimidated by the general education classes required. While stacking credentials are designed to encourage students to ultimately obtain more education, self-esteem can be a limiting factor. Several CHAMP staff members commented on the need to show students that they are doing well in order to convince them to continue on to higher levels of credentialing. One benefit of LCC's new stacked program is that students are able to obtain three certificates before potentially moving on to the AAS degree. With the new program, students have three chances to be successful before taking the risk of placing themselves in a more traditional classroom setting to complete general education courses. The VP noted "sometimes this is the first success they've had in education" and that helps students "get motivated to do the next one." In this way, LCC is turning the challenge of an at-risk population into an achievement by creating programs designed to increase the chances of student success.

Successes/Achievements to Date

The ability of the CHAMP team to create a new, fully operational program in a short period of time is a huge success. As the vice president of student services outlined, "you have to get approval for the new curriculum, get it past financial aid and academic review – they did a great job getting this through." The renovation of the welding workshop has also been a big success. CHAMP-purchased equipment has allowed students to work with state-of-the art equipment and has allowed the college to mimic a workforce environment for students.

An increase in welding enrollment has also been a big achievement for the school. For example, the navigator noted that "in the spring semester of 2014 [the welding program] had 15 students, which was the most they'd ever had, and then for fall 2014, [enrollment] jumped to 37." Since then, enrollment has remained in the high 30s. A strong and supportive team has helped

encourage program growth. One of the project leads described the process as "really a team effort." The other said "if there's one thing I've learned in education, it's that you can't be an expert at everything, and you need to accept where you have no expertise and find that." Collaboration is a common theme at LCC.

Additionally, one project lead highlighted the sustainability of the new hybrid program as a great achievement. She stated that the new curriculum "more replicates the workplace... and it's easy to change and update in the event that we have an instructor move and go elsewhere; [the online components provide] an institutional base, which makes the program a lot stronger." She continued: "We've had an issue in the past, not in welding, but elsewhere – an instructor leaves and a program just goes downhill." The hybridized format will prevent this from happening and provides a "strong framework for the welding program to go forward."

The program has also benefited from exposure to the teaching methods of other instructors outside of the immediate area. Instructors tend to teach the skills that are important to their immediate area's industry needs, which may be different than the industry needs in other areas. However, at least some LCC students will need to look for jobs outside of the community because of its rural location. For these students, exposure to welding skills that are used prevalently in other parts of Colorado may be especially useful. One CHAMP staff member said:

> If we only teach [students] the skill set that's needed in Lamar, we're doing them a disservice because they might not find the job they want in Lamar. They may need to move. And vice versa – you may find a student in Denver, their job is out somewhere in rural Colorado and they don't have the skill set that's needed there. They're just not going to be able to be successful.

Sharing has helped expand the curriculums of colleges in the consortium. LCC hopes to continue such collaboration in the future.

NEXT STEPS

As mentioned above, LCC plans to further refine its courses to address any continuing "glitches" in online course delivery, such as broken links. As the use of online materials becomes more prominent, course design and functionality become increasingly central to the student experience. Welding faculty are hoping to have all broken links and unusable course material (relating to equipment LCC does not have in the shop) eliminated by the next run of the program—spring semester, 2016. This will help guarantee future students a positive online experience and will reduce stress on the small welding team to make changes later.

CHAMP staff and the institution as a whole see expansion of the welding program as a viable next step in the near future. Staff members foresee adding two more evening courses and the possibility of including an open lab, possibly on Saturdays. The program is already currently

expanding; the current adjunct faculty is moving to a full-time position as early as next semester (spring of 2016), and a new adjunct faculty member is currently being sought. The new adjunct will likely allow for the expansion of the additional courses, which will thus allow for higher student enrollment in the program. The expansion of the program would also allow the three instructors to divide the groups of students into groups: basic, intermediate, and advanced. Currently, the students are "all mixed in" together, which has created some challenges for the instructors.

LCC's navigator is hoping to further develop work experience opportunities for students, likely throughout the summer, in lieu of internships for the program. This concept is still in the works, but she is optimistic that something can be done to help students with no work experience to receive some. By having students participate in "learning on the job," she hopes this will overcome the resistance many employers have regarding internships and give students work experience at the same time.

LCC definitely plans to continue the hybrid welding program after the grant term ends. While LCC is constantly evolving to meet the needs of the workforce, the school has great confidence in the curriculum it created under CHAMP. The new program offers an excellent jumping-off point for future upgrades and has improved the school's reputation as a home for training for the 21st-century workforce.