Minnesota State Community and Technical College
Construction and Utilities Succeed
Final Evaluation Report

McREL INTERNATIONAL

September 2018

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Executive Summary

In October 2014, Minnesota State Community and Technical College (M State) received a grant award through Round 4 of the Trade Adjustment Assistance Community College and Career Training (TAACCCT) program, sponsored by the U.S. Department of Labor (DOL), to expand and improve career training programs in the construction and utilities industries. Through this four-year grant, the project, titled Construction and Utilities Succeed (CU Succeed), collaborated with employers and workforce partners in the region to provide specialized postsecondary education to trade-impacted and other dislocated workers, the long-term unemployed, veterans, and other adults who seek to develop or advance their career path in the construction and utilities industries.

Using TAACCCT grant funding, the CU Succeed project served a total of 1,019 participants in gaining the skills and knowledge needed to be successful in the field of construction and utilities. The demographics of CU Succeed participants were primarily Caucasian (80%) and male (91%). About 15% were enrolled full-time; 81% were enrolled in non-credit programs; 68% were incumbent workers; 7% were eligible veterans or veterans' spouses; 5% were eligible for Pell grant funding; 1% were workers eligible for trade adjustment assistance (TAA); and less than 1% were individuals with disabilities. On average, participants are about 37 years old (SD = 13.63).

The ultimate goal of the CU Succeed project was to provide education, training, and services to ensure participant success in education and employment. This report presents findings of the CU Succeed project's implementation and outcomes of participants. A brief description of the project's evaluation design is provided, followed by a summary of implementation and outcome findings. Conclusions and recommendations are also provided for future research and evaluation efforts.

Evaluation Design Summary

This section provides a brief overview of the conceptual framework and evaluation design, including the formative and summative evaluation components.

Conceptual Framework

The CU Succeed project's design was guided by the career pathways framework of postsecondary education to address the challenge of preparing adult learners (age 18 or older) to complete their program of study and secure high-skilled and high-paid jobs in the field of construction and utilities. Specifically, the CU Succeed project implemented seven key strategies to support the grant objectives:

- Strategy 1. Provide career pathways using existing and new portable, stackable and latticed industry-recognized credentials

- Strategy 2. Enhance student career and wrap-around supportive services

- Strategy 3. Develop online and technology-enabled hands-on mobile training opportunities

- Strategy 4. Enhance integration and contextualization of remedial education and soft skills training

- Strategy 5. Enhance and expand outreach and recruitment of TAA-eligible and similar adults

- Strategy 6. Incorporate transferability and articulation into career pathways

- Strategy 7. Ensure timely data collection, reporting, and analysis

It was hypothesized that, with enhanced curricula incorporating technology-enabled hands-on components, wraparound student support services, integration of remediation education, and soft skills training, the CU Succeed project will be able to provide the training, education, and services needed to support students' educational success (i.e., prevent withdrawals and support program completion) and employment successes (i.e., gain employment, be retained in employment, and receive wage gains).

Evaluation Design

The CU Succeed project evaluation contains a formative evaluation component examining the extent to which the project was implemented as intended as well as a summative evaluation component assessing the outcomes of the CU Succeed project on participants.

Summative Evaluation Questions and Design. Three summative evaluation questions are examined:

1. To what extent does the program achieve its intended outcomes?

2. To what extent does the CU Succeed program have an impact on project participants?

3. How does the CU Succeed program work to support participant outcomes?

To address the first question, evaluators will descriptively report participants' outcomes on the following nine indicators and compared the outcomes against the projected targets:

1. Total Unique Participants Served

2. Total Number Who Have Completed a Grant-Funded Program of Study

3. Total Number Still Retained in Their Program of Study or Other Grant-Funded Program(s)

4. Total Number of Students Completing Credit Hours

5. Total Number of Students Earning Credentials, Diplomas, and Degrees

6. Total Number Enrolled in Further Education After Program of Study Completion

7. Total Number Employed After Program of Study Completion

8. Total Number Retained in Employment After Program of Study Completion

9. Total Number of Those Employed at Enrollment Who Received a Wage Increase Post-enrollment

Additionally, evaluators collected qualitative data through interviews and focus groups to understand participant perception of project impact and the strategies that support participants' outcomes.

Formative Evaluation Questions and Design. Three overarching formative evaluation questions guided by the TAACCCT Round 4 Solicitation for Grant Applications (SGA) are described below:

1. How were the key strategies and activities of the project implemented?

2. To what extent were the key project strategies and activities implemented with fidelity? What were the operational strengths and weaknesses of the project after implementation?

3. To what extent is the program sustainable and transferable?

The focus of the formative evaluation was to document the implementation of the CU Succeed project components to ensure that all of the key elements are implemented as planned, and to ascertain whether the components are sustainable and transferable (replicable) beyond the life of the grant. To answer these questions, evaluators conducted mixed methods to gather both qualitative and quantitative data from various groups and sources (e.g., project records, interviews, surveys, and focus groups), and then triangulating the findings. Additionally, fidelity assessments are conducted to understand the extent to which the project components were being implemented with fidelity in terms of adherence, quality, and participant responsiveness (Century, Rudnick, & Freeman, 2010).

Summative Evaluation Findings

This section presents findings of the impact and outcome evaluation. Key findings are summarized as follows:

- The CU Succeed project met and exceed four out of nine performance indicators. They are:

  o CU Succeed project served a total of 1,019 participants throughout the grant period, which was more than two times of the projected recruitment number of 450.

  o 100% (1,016 out of 1,019) of the participants completed a grant-funded program of study as compared to the target of 90% by the end of the grant.

- 100% (1,016 out of 1,019) of the participants earned at least one industry-recognized credential or college-awarded certificate as compared to the target of 100% by the end of the grant.

- 27% (277 out of 1,019) of the participants received wage increases after becoming enrolled in a TAACCCT-funded program of study, which was 18-percentatge points higher than the target of 9%, by the end of the grant. It should be noted that, per the DOL, the estimation should be based on the number of incumbent workers who received wage increases after enrollment. The DOL's definition would result in 33% (227 out of 682) of the incumbent workers receiving wage increases. However, there is no information available about the number of projected incumbent workers in the project narrative; therefore, the evaluators are unable to compare the performance target with the actual outcomes with the more accurate estimation based on the DOL definition.

- CU Succeed project did not meet five performance indicators:

  - By the end of the performance period, none of the participants were retained in any of the grant-funded program as compared to the target of 1%. This is because all but three participants left their program of study without completing the program requirements.

  - One percent (111 out of 1,019) of the participants earned credits in comparison to the target of 90%. This outcome is below the target because the project made a major shift in the direction of program offerings during the early planning and development stage. That is, after meeting with local industry partners, the project team recognized that there is an urgent need in the region to provide short-term programs that allow workers to complete the training quickly while they remain on the job. As a result, the CU Succeed project team focuses on offering non-credit programs that allow workers to earn industry recognized credentials quickly while gaining the skills set needed to perform better in their jobs. Actually, of 1,019 participants recruited, 822 (81%) were enrolled in the non-credit programs.

  - None of the program completers enrolled in further education (TAACCCT grant funded or not) as compared to the target of 26%. It should be noted that, with limited resources, the CU Succeed project team only tracks participants who continued their education within M State after completing a program of study; hence, it is unknown how many participants continued their education outside of M State.

  - Four percent (114 out of 1,016) of the program completers gained employment during the first quarter after exiting their program of study in comparison to the target of 64%. It should be noted that this outcome may be underestimated

given the time lag between when the employment and wage data became available for DEED to conduct the analysis, especially for Year 4 participants. Additionally, per the DOL, the estimation should be based on the number of non-incumbent workers who gained employment during the first quarter after existing their program of study. The DOL's definition would result in 81% (114 out of 140) of the incumbent workers receiving wage increases. However, there is no information available about the number of projected incumbent workers in the project narrative; therefore, the evaluators are unable to compare the performance target with the actual outcomes with the more accurate estimation based on the DOL definition.

- o 51% (21 out of 41) of the participants who gained employment were retained as compared to the target of 90% (827 out of 827). As discussed in Indicator #7, this outcome may be underestimated due to time lag between when the employment and wage data became available for DEED to conduct the analysis.

- With regard to project impact, stakeholders (i.e., partners and project participants) overall reported positive views regarding the positive contribution of the CU Succeed program to the local workforce development as well as individual participants' career path and development.

- When asked to discuss the aspects of the project that are most valuable, both partners and project participants highlighted the value of technology enabled mobile training units and its importance to make training accessible to participants and partners in the rural remote areas.

Implementation Evaluation Findings

After triangulating data collected during grant Year 3, key findings are summarized below.

- Project staff and partners reported positive perspectives regarding the implementation and impact of the CU Succeed project, characterizing the project and related activities as providing a major service to both students participating in grant-affiliated programs of study and the regional workforce.

- The CU Succeed project and students enrolled in the grant-affiliated training programs continue to benefit from M State's long-standing partnership with Moorhead State University through transfer and articulation agreements into career pathways.

- Partner engagement has proven invaluable in providing essential supports to the CU Succeed project, specifically in terms of program design, curriculum development, recruitment, training placement, leveraging of resources, program sustainability, and job placement services (as appropriate and when applicable, given that most participants served by the grant are incumbent workers).

- A number of challenges that arose throughout the course of the CU Succeed project include:
  - Partners and participants expressed a greater interest in the non-credit based programs than the credit based programs. As a result, the CU Succeed project team decided to make a major modification to the project work plan to focus on developing and offering non-credit based programs that are aligned with industry recognized credentials to meet the immediate needs of the partners and local workforce soon after the grant award. Project staff indicated that this change stems primarily from partners' and participants' preference for shorter training offerings that allow employees to return to work more quickly, as well as expressed the opinion that such trainings are of greater use to the local community and workforce.
  - Project staff experienced difficulty in generating student and partner buy-in for the importance of soft skills development. Project staff expressed frustration that the partners have not utilized the Plus program as much as they suggested that they would during its initial development and implementation, but shared that they are currently re-examining the program and exploring alternative means by which to facilitate greater enrollment.
- Major successes accomplished by the CU Succeed according to stakeholders include:
  - comprehensive support from industry partners to ensure alignment between CU Succeed programs and trainings and industry needs;
  - cultivation of strong relationships between project staff and partners, characterized by interview participants as "true partnerships;"
  - development of a highly-qualified and highly-skilled workforce ready to meet regional construction and utilities needs; and
  - continued facilitation of access to learning and training for individuals in remote locations who would have otherwise been unable to participate in professional development.
- Fidelity assessments revealed that:
  - As of the end of grant Year 3, the project was at the 97th percentile in terms of full implementation.
  - The CU Succeed project team made several major modifications to the original project work plan during the early planning and development stage. Modifications include (1) changes in program model (i.e., shifting program offerings from primary credit programs to non-credit programs and conceptualizing the Plus program as a stand-alone program of study), (2) leveraging resources from the Spartan Center at M State to provide wrap-around support services, and (3) leveraging resources from the ABE program at M State to provide remedial education to grant participants as needed. These

modifications are necessary and are aligned with project objectives to ensure that the program offerings meet the needs of the local industries and workforce development in the area of construction and utilities.

- o From participant perspective, the CU Succeed project activities were implemented with high quality across all areas.

- o Participants were extremely responsive to programs in which they were enrolled and characterized their learning experiences in these programs as extremely positive.

Conclusions

The CU Succeed project was not implemented without challenges; yet, the project team continued to identify issues, streamline resources, and actively reached out to potential partners and nurturing existing partnerships to overcome the barriers as issues arose. The efforts put forth by the project team paid-off as evidenced by the findings of the fidelity assessment—project strategies were largely implemented as planned; participants and partners shared the perception that the project strategies were implemented with quality; and participants were satisfied with the project's implementation and felt engaged. The project's implementation successes translated into some aspects of the project outcomes. First, the project exceeded the target recruitment number—it served a total of 1,019 individual in four years, which was more than two times of the original recruitment target. When looking at the performance targets, although the project did not meet the targets on five outcomes, the shortcomings were primarily due to the limitation of data availability when the report was prepared as well as the overestimation of projected numbers when the proposal was written.

Key challenges that McREL evaluators experienced when conducting the implementation and outcome evaluation of the CU Succeed project are summarized below:

- **Low survey response rates from partners.** Despite efforts to try various methods to secure higher response rates (e.g., shortening the survey, using both paper and online formats, and having project staff conduct individual follow up via phone calls), response rates tended to be low. One potential barrier to securing a higher response rate was not being allowed to use incentives.

- **Projected outcomes that were included in the grant application were frequently unrealistic.** This appears to be primarily due to a lack of understanding about the definitions of the indicators when grantees prepared their proposals and those with familiarity or knowledge of realistic targets were not involved in the grant-writing process. The SGA provided some initial descriptions of the outcome indicators, but greater detail provided in future SGAs may result in more realistic projections. Recruitment also became an issue as a result of the upturn in the economy.

- **Understand the limitation of unemployment insurance (UI) data.** While it is cost effective to use employment and wage data collected from the workforce agency (i.e.,

DEED), it is important to understand the potential data limitations. First, too often individual-level data are not accessible for evaluation purposes. Secondly, certain types of workers are not tracked in the UI database, including proprietors, the self-employed, railroad workers (they have their own national system of UI), family farm workers, full-time students working for their school, elected government officials, insurance and real estate salespersons, migrants who move out of the state after program completion, and others who work only on a commission basis. Although, in general, DEED's UI program covers 97% of employment and wage data in Minnesota. It should also be noted that, despite the limitations, UI wage data is still the most comprehensive source of employment and wage data for evaluating workforce, education, or economic development programs. More information about DEED UI data is available at http://www.uimn.org/employers/wages-taxes/covered/.

Given the challenges McREL evaluators faced related to the limitation of data availability, several suggestions are provided for future workforce and education research initiatives:

- Consider funding longitudinal studies to track a sample of participants to examine long-term outcomes and likewise study sustainability of TAACCCT-funded programs at a sample of colleges.

- Include workforce agencies who can supply the UI data in the research and evaluation team as they have access to individual-level employment and wage data and can perform or assist with the analyses needed to address the questions of interest in the field of workforce development and career and technical education.

Chapter 1: Introduction and Overview

In the spring of 2015, Minnesota State Community and Technical College (M State) contracted McREL International (McREL) to conduct formative (implementation) and summative evaluation of its grant program, Construction and Utilities Succeed (CU Succeed), funded by the U.S. Department of Labor (DOL) under the Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant. This chapter first provides an overview of the CU Succeed Project, followed by a brief summary of evaluation questions and the program framework. The remainder of the report is organized into the following chapters:

Chapter 2: Measures and Data Collection

Chapter 3: Summative Evaluation Design

Chapter 4: Summative Evaluation Findings

Chapter 5: Implementation Evaluation Design

Chapter 6: Implementation Evaluation Findings

Overview of the CU Succeed Project

Changes in the U.S. labor market, due to factors such as technological innovation and globalization, require a better prepared workforce equipped for success in an evolving industrial landscape (Carnevale, Smith, & Strohl, 2010). As the demand for personnel with higher education and skill levels continues to grow, individuals frequently need some form of postsecondary education to be competitive in the workplace and maintain family-sustaining employment (Carnevale et al., 2010; Hoffman & Reindl, 2011). To address this issue, M State received a four-year grant award through Round 4 of the TAACCCT grant to expand and improve certificate and degree programs in the field of construction and utilities. Through the CU Succeed project, M State collaborated with local workforce agencies and industry partners to provide specialized postsecondary education to Trade Adjustment Assistance (TAA) and similar adults to advance their career paths in the construction and utilities industries.

Figure 1. M State Service Area

Figure 1 is the service areas covered by M State. Between 2014 and 2018, the CU Succeed project served 1,019 participants in the West Central Workforce Service Area (WSA-02), spanning 19 counties and 20,000 square miles, as a result of the TAACCCT grant. The main focus of this report is to describe
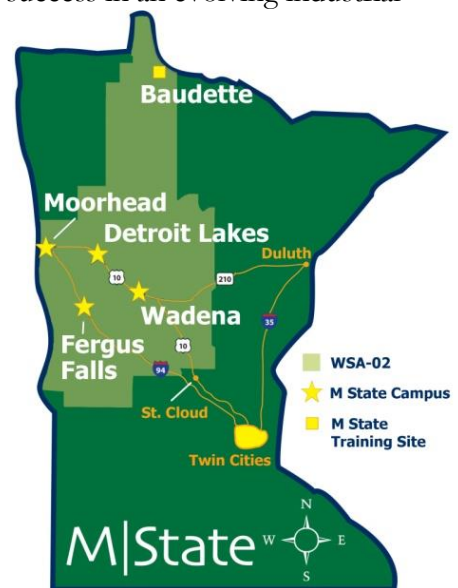
the outcomes of the CU Succeed project as well as the operation and implementation of the project in supporting participant outcomes.

Evaluation Questions

Within the context of the TAACCCT grant's overall evaluation strategy, the CU Succeed project evaluation addresses both formative and summative questions. As such, in addition to examining the extent to which the project goals were met and outcomes were achieved (i.e., summative evaluation), the CU Succeed project's evaluation also examined questions related to its implementation—the structural and procedural fidelity of program implementation. This section briefly describes the evaluation questions being explored.

Summative Evaluation Questions

Three summative evaluation questions were examined:

1. To what extent did the program achieve its intended outcomes?
2. To what extent did the CU Succeed program have an impact on project participants?
3. How did the CU Succeed program work to support participant outcomes?

The aim of the summative evaluation was to (1) understand the extent to which the CU Succeed has achieved its projected outcomes (Question 1) and has an impact on project participants (Question 2), and (2) identify the underlying mechanism through which the project impacted participants (i.e., how and what works to support participant success in education and employment) (Question 3).

Implementation Evaluation Questions

Three overarching formative evaluation questions guided by the TAACCCT Round 4 Solicitation for Grant Applications (SGA) are described below:

1. How were the key strategies and activities of the project implemented?
2. To what extent were the key project strategies and activities implemented with fidelity? What were the operational strengths and weaknesses of the project after implementation?
3. To what extent is the program sustainable and transferable?

Specifically, the formative evaluation (1) analyzed the steps taken by the CU Succeed project staff to create and implement the project (Question 1), (2) assessed the project's operational strengths and weaknesses with an in-depth understanding of implementation fidelity (Question 2), and (3) examined its sustainability and transferability (scalability) beyond the life of the grant (Question 3). Additionally, formative evaluation also addressed nine questions related to the operation of CU Succeed project that were specified in the TAACCCT SGA. These SGA questions are:

SGA.Q1. How was the particular curriculum selected, used, or created?

SGA.Q2. How were the programs and program design improved or expanded using grant funds?

SGA.Q3. What delivery methods were offered?

SGA.Q4. What was the program's administrative structure?

SGA.Q5. What support services and other services were offered?
SGA.Q6. Was career guidance provided and if so, through what methods?

SGA.Q7. Did the grantees conduct an in-depth assessment of participants' abilities, skills, and interests to select participants into the grant program? What assessment tools and processes were used? Who conducted the assessment? How were the assessment results used? Were the assessment results useful in determining the appropriate program and course sequence for participants? Was career guidance provided and if so, through what methods?

SGA.Q8. What contributions did each of the partners make in terms of (1) program design, (2) curriculum development, (3) participant recruitment, (4) training placement, (5) job placement, (6) program management, (7) leveraging of resources, and (8) sustainability planning?

SGA.Q9. What factors contribute to partners' involvement or lack of involvement in the program? Which contributions from partners were most critical to the success of the grant program? Which contributions from partners had less of an impact?

Project Framework

The CU Succeed project's design was based on the career pathways framework of postsecondary education to address the challenge of preparing adult learners (age 18 or older), especially individuals in need of advanced training, to secure high-skilled and high-paid jobs in the construction and utilities industries. Career pathways, by definition, are "well-articulated sequences of quality education and training offerings and supportive services that enable educationally underprepared youth and adults to advance over time to successively higher levels of education and employment in a given industry sector or occupations" (Center for Postsecondary and Economic Success, 2013). A career pathways approach offers a clear sequence of coursework and training credentials that support individuals' career goals and paths while meeting the needs of local employers and growing sectors and industries (Kozumplik, Nyborg, Garcia, Cantu, & Larsen, 2011). Often, a career pathways program also requires a partnership with local organizations (e.g., human services, workforce agencies, and industry partners) in order to provide comprehensive services to the targeted populations (Center for Postsecondary and Economic Success, 2013; Fein, 2012; Kozumplik et al., 2011).

The CU Succeed project embodied several core components that are guided by the career pathways framework. Seven strategies were implemented to support project goals and objectives.

- Strategy 1. Provide career pathways using existing and new portable, stackable and latticed industry-recognized credentials.
- Strategy 2. Enhance student career and wrap-around supportive services.
- Strategy 3. Develop online and technology-enabled hands-on mobile training opportunities.
- Strategy 4. Enhance integration and contextualization of remedial education and soft skills training.
- Strategy 5. Enhance and expand outreach and recruitment of TAA-eligible and similar adults.
- Strategy 6. Incorporate transferability and articulation into career pathways.
- Strategy 7. Ensure timely data collection, reporting, and analysis.

Presented in Figure 2 is the logic model of CU Succeed. It presents a theory of action describing the connections between resources required to carry out the project, the strategies that were guided by the career pathways framework to support student success, the expected output as a direct result of the strategies, and the main outcomes of interest. This logic model shows that one may expect the intended outcomes when the project strategies were implemented as planned, and when the quality of implementation as well as participants' response and engagement in these services were high, as these factors are what matters the most to ensure students' success. Therefore, the focus of the implementation evaluation is not only to document the implementation of key strategies, but also evaluate the quality and participant responsiveness (e.g., satisfaction, engagement, and enthusiasm) to the outputs. The outcome measures depicted in the logic model were defined by the DOL, and the targets of the outcomes were set by the M State during the proposal development stage. Table 1 provides the definitions for the outcome measures.

Resources	Strategies	Outputs	Outcomes
• Project staff (i.e., Project Manager, Project Coordinator, Assistant Project Coordinator, industry liaisons, recruitment, retention, and outreach staff, faculty/instructors, academic and counseling staff. • Industry partners • Workforce partners	• Provide career pathways using existing and new portable, stackable and latticed industry-recognized credentials. • Enhance student career and wrap-around supportive services. • Develop online and technology-enabled hands-on mobile training opportunities. • Enhance integration and contextualization of remedial education and soft skills training. • Enhance and expand outreach and recruitment of TAA-eligible and similar adults. • Incorporate transferability and articulation into career pathways. • Ensure timely data collection, reporting, and analysis.	• Participants were enrolled in a TAACCCT-funded program of study. • Implemented strategies and activities adhered to the project plan. • Strategies and activities were implemented with high quality. • Participants are engaged, satisfied, and enthusiastic about the program and the services they received.	• 450 participants were recruited. • 405 participants completed a grant-funded program. • 5 participants were still retained in the grant-funded program. • 405 participants completed credit hours. • 450 participants earned at least one credential. • 105 participants enrolled in further education. After program completion. • 260 participants were employed after program completion. • 235 participants were retained in employment. • 40 participants who were employed at enrollment received a wage increase post-enrollment.

Figure 2. CU Succeed Project Logic Model

Table 1. CU Succeed Project Outcome Measures and the Performance Targets

Outcome Measures		Definitions	Performance Targets		
			N	%[a]	Explanation
1	Total unique participants served	Total number of unique participants who were enrolled in any grant-funded program.	450	100%	The project would train at least 450 unique participants.
2	Total number of participants completing a TAACCCT-funded program of study	Total number of unique participants who completed any grant-funded program. Completion is defined as having earned all of the credit hours needed for the award of a degree or certificate in that program of study regardless of graduation status. Participants were only included once, even if they completed multiple programs of study.	405	90%	90% (405 out of 450) of the grant participants would complete a TAACCCT-funded program
3	Total number of participants still retained in their program of study or other TAACCCT-funded program	Of the total number of unique participants enrolled who have not completed their programs, the total number of enrollees who are still enrolled either in their original program of study or a different grant-funded program of study at the end of the performance period.	5 [b]	1%	1% (5 out of 450) of the grant participants would be retained in a TAACCCT-funded program
4	Total number of participants completing credit hours	Number of students who have enrolled and completed any number of credit hours.	405	90%	90% (405 out of 450) of the grant participants would complete at least some credit hours.
5	Total number of participants earning credentials	Total number of students who earned certificates (including industry-recognized credentials), diplomas, or degrees. A student can be counted only once in this field even if multiple certificates, diplomas, or degrees were earned by that student.	450 [c]	100%	100% (450 out of 450) of the grant participants would earn credentials, diplomas, or degrees.
6	Total number of participants enrolled in further education after TAACCCT-funded program of study completion	Of the total number of participants who completed at least one grant-funded program, the total number of individuals who entered another program of study (grant-funded or not).	105	26%	26% (105 out of 405) of the grant participants who completed a program of study would enroll in further education.
7	Total number of participants employed after grant-funded program of study completion	Of the total number of participants who were not incumbent workers and who completed at least one grant-funded program, the total number of individuals who entered	260	64%	64% (260 out of 405) of the program completers would gain employment.

	Outcome Measures	Definitions	Performance Targets		
			N	%[a]	Explanation
		unsubsidized employment in the first quarter after the quarter in which they exited the college. Per the DOL, the estimation should have been based on the number of non-incumbent workers who gained employment within the first quarter after completing at least one program of study. However, there is no information available about the number of projected non-incumbent workers in the project narrative; therefore, the percentage of program completers who gain employment was instead calculated.			
8	Total number of participants retained in employment after program of study completion	Of the total number of participants who were employed in the first quarter after the quarter in which they exited the college, the total number of individuals who were employed in the second and third quarters after exiting.	235	90%	90% (235 out of 260) of the participants who gained employment would be retained in employment.
9	Total number of those participants employed at enrollment who received a wage increase post-enrollment	Of the number of incumbent workers (those employed at enrollment) who enter a grant-funded program, the total number who received an increase in their wages at any time after becoming enrolled. Per the DOL, the calculation should have been based on the number of incumbent workers. However, there is no information available about the number of projected incumbent workers in the project narrative; hence, the percentage of all participants who receive wage gains was instead calculated.	40	9%	9% (40 out of 450) of the participants would receive a raise.

[a] when comparing the results against the projected targets, percentages were calculated to allow for these comparisons to occur from a better perspective. For instance, if the CU Succeed project recruited a lower number of participants than what was projected, the percentage of participants who complete a program of study is calculated and is used to compare against the projected percentage to avoid underestimating the project's performance in reaching the anticipated outcomes, vice versa. In addition, it should be noted that the denominators used to calculate the percentages differ depending on the definition of each indicator.

[b] The grant writer originally set up the performance target by adding the number of participants retained from Years 1, 2, and 3; however, to evaluate the extent to which the CU Succeed project has an effect on retention rate, it is more appropriate to set the performance target based on the number of participants retained as of the end of the performance period, which was 5 and is used for the evaluation.

Outcome Measures	Definitions	Performance Targets		
		N	%[a]	Explanation

[c] The total number of participants earning credentials should not be greater than the number of participants served. In the program narrative, the target was set as 475 over the course of the grant period, which violates the rule. For the evaluation, the target was revised as 450 which equals to the number of participants served. As a result of the revision, evaluators also revise the projected number in Year 3 from 178 to 153; hence, the total number of participants earning credentials would be equal to 450.

Chapter 2: Measures and Data Collection

Given the multifaceted evaluation design, McREL evaluators gathered both quantitative and qualitative information through a variety of methods (e.g., surveys, interviews, focus groups, and extant data) from multiple sources (e.g., program staff, participants, other stakeholders such as partners/employers, and project records). This mixed-method design allowed evaluators to triangulate the data from various sources to provide a deeper understanding about the processes and mechanisms that contributed to the outcomes. This section presents the methods, instruments, and activities for data collection. Table 2 shows the alignment of evaluation questions with the data collection methods.

Table 2. Evaluation Questions and Data Collection Methods

Evaluation Questions	Extant Data	Staff and Partner Interviews	Partner Survey	Participant Survey	Participant Focus Groups
Outcome Evaluation Questions					
1. To what extent does the program achieve its intended outcomes?	X				
2. To what extent does the CU Succeed program have an impact on project participants?	X	X	X	X	X
3. How does the CU Succeed program work to support participant outcomes?		X			X
Implementation Evaluation Questions					
4. How were the key strategies and activities of the project implemented?	X	X	X	X	X
5. To what extent were the key project strategies and activities implemented with fidelity? What were the operational strengths and weaknesses of the project after implementation?	X	X	X	X	
6. To what extent is the program sustainable and transferable?	X	X	X		

Project Records

Data collected and maintained as a regular part of the CU Succeed project are collected by evaluators to be used as part of the evaluation. These data included (1) quarterly reports submitted to DOL, (2) annual performance reports submitted to DOL, (3) documentation of recruitment efforts, (4) records of outreach to and interactions with participants and partners, (5) advisory board meeting minutes, (6) program descriptions, (7) individual participants' educational records, and (8) participants' aggregated employment and wage data. Participants' educational records, in particular, were tracked longitudinally by CU Succeed project staff and were transmitted to McREL evaluators

for evaluation purposes. Educational records included participant demographic data, certification and degree earned, courses taken and credits earned, retention status, and program completion status. To allow for data sharing between M State and McREL, a data sharing agreement was established in March 2016. Additionally, employment and wage data (UI data) collected by DEED were used as the main source of employment and wage outcome data for participants who provided the social security number to M State during the intake process. M State has establishing a data sharing agreement with DEED during the first quarter of grant Year 3 to secure access of the UI data. The data sharing agreement between M State and DEED also allowed McREL evaluators to access the aggregated UI data for evaluation purposes. For participants who did not provide social security number to M State during the intake process, M State staff reached out to these individuals or their employers regularly via phone and/or email throughout the performance period to collect employment and wage data.

Project Staff and Partner Interviews

In May 2016, McREL evaluators conducted interviews with 10 project staff and partners to gather their perceptions on implementation progress, barriers and challenges of project implementation, and partners' involvement in project implementation to date. These interviews were designed to assess each individual's role and involvement in the development and implementation of key project components, as well as successes and challenges they experienced. Additionally, questions were tailored to staff members' specific responsibilities to gain a more comprehensive understanding of the project's implementation from various perspectives. Partner interviews were designed to gather information about their experiences with and perceptions of the CU Succeed project and its staff as well as their roles in supporting the key components. The length of the interviews lasted approximately 30 to 60 minutes depending on each individual's role and level of involvement in the project.

In April 2017, 10 project staff and partners were interviewed again to inform progress made since the previous interview and address persistent or new challenges and successes. Additional questions related to challenges and successes in participant recruitment, program sustainability and transferability, and the perceived impact of the project on project participants were asked.

Partner Survey

A Partner Survey was administered online to employer and workforce partners of the CU Succeed project in November and December of 2016. Thirty-nine partners were invited to take the survey, and nine responded with a response rate of 23%. The purpose of the survey was to gather information related to partners' (1) level of involvement in project activities, (2) perceptions of implementation quality, (3) satisfaction with project activities and services, and (4) perceptions of the project's impact on the manufacturing industry and local community. The survey took about 10 minutes to complete.

In February of 2018, a revised Partner Survey was administered again to employer and workforce partners of the project. To encourage response rate, the survey was shortened to eight

minutes to complete. Additionally, the survey administration method was changed from online administration to mail postage with individual follow up phone calls from project staff. The survey continued to gather data assessing partners' (1) level of involvement in project activities, (2) perceptions of implementation quality, (3) satisfaction with project activities and services, and (4) perceptions of the project's impact on the manufacturing industry and local community. The survey took about 10 minutes to complete. Table 3 shows the characteristics of partners who responded to the survey in 2016 and 2018.

Table 3. Characteristics of Partner Survey Respondents

Partner Characteristics	Dec 2016 (N = 9)		Feb 2018 (N = 12)	
	n	%	n	%
When became involved with the project				
Before the project was funded	3	33.3%	3	25.0%
After the project was funded	6	66.7%	8	66.6%
Partner Type				
Industry	5	55.5%	4	33.3%
Workforce	2	22.2%	4	33.3%
Education/Community	2	22.2%	3	25.0%

Note. Percentage may not add up to 100% due to missing data or rounding.

Participant Focus Groups/Interviews

In May 2016, McREL evaluators conducted two focus groups with samples of CU Succeed project participants to gather in-depth, qualitative information about their perceptions of the quality of instruction received, the quality of the programs in which they are enrolled, academic and/or career support services received, their involvement and satisfaction with the mobile training units, challenges experienced, and their overall perspectives concerning M State's CU Succeed project. With assistance from project staff, two group interviews were conducted with a total of 11 students (one group was comprised of five students and a second comprised of six).

In April 2017, due to scheduling challenges, McREL evaluators were unable to conduct the focus group on site; instead, three individual participants were interviewed over the phone with the same set of questions, in addition to several other questions regarding the project's perceived impact on their education and training experiences.

Participant Survey

All CU Succeed program participants who were enrolled during grants Years 1 to 3 were invited to take a Participant Survey before program exit. The survey asked participants to answer questions about their experience with the program and quality of the instruction and services they have received. Paper survey was administered throughout the grant period, and the survey took about 10 minutes to complete. Throughout the grant period, a total of 505 out of 1000 U Succeed project participants who were enrolled during grants Years 1 to 3 responded to the survey, which

results in a response rate of 51%. Of those, 36 participants' names were unidentifiable from the returned paper surveys. Table 4 shows the response rate by cohort. Cohort was defined by the year of the grant period when participants were enrolled in the first program of study.

Table 4. Participant Survey Response Rate by Cohort

Participant Cohort (Grant Year)	Number of Grant Participants Enrolled	Number of Unique Participants Responded to the Survey	Response Rate
Cohort 1 (2014-15)	27	8	29.6%
Cohort 2 (2015-16)	395	135	34.2%
Cohort 3 (2016-17)	578	326	59.4%

Additionally, of those who responded to the survey, 38 participants responded to the survey more than once because they completed more than one program of study. All survey responses were retained in the analysis because participants may have different experience with different programs of study. Hence, a total of 543 survey responses were included in the final analysis.

Program Sustainability Assessment Tool

The Program Sustainability Assessment Tool (PSAT), developed by the Center for Public Health Systems Science (CPHSS, https://sustaintool.org/), was used to assess the sustainability of the CU Succeed program.[1] Specifically, the PSAT measures eight factors that have been found to be critical for the sustainability of a project or initiative. These eight factors include: (1) environmental support, (2) funding stability, (3) communications, (4) strategic planning, (5) partnerships, (6) program adaption, (7) program evaluation, and (8) organizational capacity.

The PSAT was first administered in May 2017 (grant Year 3). A total of 11 individuals were invited to take the survey through a public website developed by the CPHSS. These individuals included M State administrators, project staff, CU Succeed program instructors, as well as project partners who were actively involved in the implementation and sustainability planning of the CU Succeed project. Seven individuals responded to the survey with a response rate of 64%. A summary report was generated automatically from the public website and used for the evaluation.

In February 2018 (grant Year 4), the PSAT was administered in paper format with nine project staff and 49 partners. The paper format was used to encourage response rate from project partners. Specifically, the paper survey was included in the partner survey package that was distributed to the partners via mail postage. Eight out of nine project staff returned the survey with a response rate of 89%. Twelve out of 49 partners return the PSAT survey with a response rate of 25%.[2] Results from M State personnel and project partners were analyzed altogether to understand whether the sustainability status of the CU Succeed project changed over time.

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[1] Permission to use the tool was secured prior to the administration of the survey.
[2] Two out of 12 partners who returned the PSAT survey indicated that none of the PSAT items were applicable to them; hence, these two responses were excluded from the analysis.

Chapter 3: Summative Evaluation Design

As mentioned in Chapter 1, three summative evaluation questions were examined by three separate studies. Details about study design, sample, methods, and analysis plan for each study are discussed below.

Study 1

The first question, *To what extent does the program achieve its intended outcomes?*, addresses questions related to the project's outcomes. In particular, evaluators examined the extent to which the project met its performance targets.

Methods and Sample

The main data sources for Study 1 were extant data collected by CU Succeed project staff and DEED, including student demographic data and outcome tracking data (i.e., educational records and employment and wage data). A detailed description about these data are described in Chapter 2 (see Project Records).

All participants (*n* = 1,019) enrolled in an CU Succeed program through the first 42 months of the grant were include in the outcome analysis. Table 5 provides the demographic characteristics of these participants. Overall, 91% of the participants were male; 80% were Caucasian; 15% were full-time students; 81% were non-credit students; 68% were incumbent workers; 7% were eligible veterans or veterans' spouses; 5% were eligible for Pell grant funding; 1% were workers eligible for trade adjustment assistance (TAA); and less than 1% were individuals with disabilities. On average, participants are about 37 years old (*SD* = 13.63).

Table 5. CU Succeed Project Participant Characteristics (N = 1,019)

Demographic Characteristics	n	%	M (SD)
Gender			
Male	922	90.5%	--
Female	71	6.8%	--
Hispanic/Latino	12	1.2%	--
American Indian or Alaskan Native	7	0.7%	--
Asian	1	0.1%	--
Black or African American	4	0.4%	--
Native Hawaiian or Other Pacific Islander	1	0.1%	--
White or Caucasian	824	79.6%	--
More than One Race	2	0.2%	--
Enrollment Status [a]			
Full-time Status	155	15.0%	--

Demographic Characteristics	n	%	M (SD)
Part-time Status	17	1.7%	--
Non-credit	822	80.7%	--
Incumbent Worker	682	66.9%	--
Eligible Veterans	75	7.4%	--
Age	--	--	36.76 (13.63)
Persons with a Disability	3	0.3%	--
Pell-Grant Eligible	52	5.0%	--
TAA Eligible	10	1.0%	--

Note. Percentages may not add up to 100% due to missing data. Number of incumbent worker reported here is based on the combination of student self-report and DEED data. DEED data was the primarily data sources for participants who provided their social security number to M State during the intake process. For those who did not provide their social security number, participant self-reported data were used to determine their employment status upon program entry. Of all participants, only 34% (n = 347) of participants provided their social security number. Of those, 215 (62%) were non-incumbent workers. Of those who did not provide their social security number (n = 672), 467 were incumbent worker upon program entry based on participant self-report.

Data Analysis

To examine the CU Succeed project's outcomes, evaluators conducted descriptive analyses of the nine TAACCCT outcome indicators listed below (see Table 1 for definitions). Percentages of participants meeting each of the outcome indicators were calculated and compared against the performance targets.

- Total number of unique participants served
- Total number of participants who have completed a TAACCCT-funded program
- Total number of participants still retained in their program of study or another TAACCCT-funded program
- Total number of participants completing credit hours
- Total number of participants earning credentials
- Total number of participants enrolled in further education after grant-funded program of study completion
- Total number of participants employed after grant-funded program of study completion
- Total number of participants retained in employment after program of study completion
- Number of participants employed at enrollment who received a wage increase post-enrollment

Study 2

The second question is: *To what extent does the CU Succeed program have an impact on project participants?* To address this question, evaluators collected both qualitative and quantitative data to understand stakeholders' perceptive of project impact.[3]

Methods/Samples

The main data sources for Study 2 included project staff and partner interview data, partner survey data, and participant focus groups/interviews data. A detailed description about these data collection methods as well as data sources and respondents are provided in Chapter 2.

Data Analysis

Data collected from different sources were analyzed and triangulated to understand stakeholder perspectives of project impact. Descriptive analyses (i.e., means, standard deviations, frequencies) were conducted with survey data. The general approach to analyzing qualitative data include the following concepts from interview analyses: *Life world*, to enter and understand what is being expressed by the interviewee; *Meaning*, to understand and interpret the meaning of central themes; *Specificity*, to obtain descriptions of specific situations; *Focus*, to focus the interview on themes as they emerge; *Qualitative knowledge*, to obtain qualitative knowledge as expressed by the interviewees; and *Deliberate näiveté*, to be open to any new and unexpected phenomena (Kvale, 1996). As appropriate, qualitative data were analyzed using NVivo software, and prevalent themes and emerging issues were identified. Thematic analysis focuses on identifying words or phrases that summarize the information being shared in the interviews. As such, data were segmented into passages through coding and emerging themes were identified, then the data were reviewed for replicating categories. These categories were given broad codes; finer coding was employed to identify patterns emerging within each coded set. Themes were then summarized by salient, prevalent issues.

Study 3

The third question, *How does the CU Succeed program work to support participant outcomes?*, aims to further examine the underlying mechanisms through which the CU Succeed project exerts its influence on participant outcomes. Evaluators collected interview data from project staff and project participants to understand the strategies that work to support participant success. A detailed description of the evaluation methods and analysis plan for Study 3 is discussed in the following section.

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[3] In the initial evaluation plan, evaluators proposed to conduct a quasi-experimental design using propensity score matching method to identify a matched comparison group to examine project impact. However, after a thoughtful and thorough discussion with M State project team, it was determined that such design was not feasible. Primarily, all of the CU Succeed programs were newly developed and were primarily non-credit courses/programs; there were no comparable programs historically or currently within M State that can be used as potential comparisons. Hence, evaluators changed the study design from a quasi-experimental design study to a descriptive study.

Methods/Samples

The main data sources for Study 3 included survey data from project participants and interview data from project staff, partners, and participants. The goal is to triangulate data from these data sources to identify the factors and strategies that support student success. A detailed description about these data collection methods as well as data sources and respondents are provided in Chapter 2.

Data Analysis

Data collected from different sources were analyzed and triangulated to understand the strategies that work to support participant outcomes. Descriptive analyses (i.e., means, standard deviations, frequencies) were conducted with survey data. The general approach to analyzing qualitative data include the following concepts from interview analyses: *Life world*, to enter and understand what is being expressed by the interviewee; *Meaning*, to understand and interpret the meaning of central themes; *Specificity*, to obtain descriptions of specific situations; *Focus*, to focus the interview on themes as they emerge; *Qualitative knowledge*, to obtain qualitative knowledge as expressed by the interviewees; and *Deliberate näiveté*, to be open to any new and unexpected phenomena (Kvale, 1996). As appropriate, qualitative data were analyzed using NVivo software, and prevalent themes and emerging issues were identified. Thematic analysis focuses on identifying words or phrases that summarize the information being shared in the interviews. As such, data were segmented into passages through coding and emerging themes were identified, then the data were reviewed for replicating categories. These categories were given broad codes; finer coding was employed to identify patterns emerging within each coded set. Themes were then summarized by salient, prevalent issues.

Chapter 4: Summative Evaluation Findings

This section summarizes the summative evaluation findings. Primarily, evaluators synthesized findings to address the questions related to the CU Succeed project's progress in reaching the project's outcome targets as of the end of grant Year 3; stakeholders' perceptions regarding project impact, and stakeholders' perceptions of the strategies that work to support participant outcomes. Findings are summarized by the evaluation questions.

1. To what extent does the program achieve its intended outcomes (Study 1)?

Table 6 shows the CU Succeed project's actual outcomes by the end the project period as compared to the projected performance targets. Methods and definitions to calculate the performance targets are described in detail in Chapter 1 (see Table 1). Overall, the project served a total of 1,019 participants during the grant period, which was more than two times of the original recruitment target. Additionally, the project met the performance target on three additional outcome measures. Key findings are summarized as follows.

- **Outcome Indicator 2:** 100% (1,016 out of 1,019) of the participants completed a grant-funded program of study as compared to the target of 90% by the end of the grant.

- **Outcome Indicator #5:** 100% (1,016 out of 1,019) of the participants earned at least one industry-recognized credential or college-awarded certificate as compared to the target of 100% by the end of the grant.

- **Outcome Indicator #9:** 27% (277 out of 1,019) of the participants received wage increases after becoming enrolled in a TAACCCT-funded program of study, which was 18-percentatge points higher than the target of 9%, by the end of the grant. It should be noted that, per the DOL, the estimation should be based on the number of incumbent workers who received wage increases after enrollment. The DOL's definition would result in 33% (227 out of 682) of the incumbent workers receiving wage increases. However, there is no information available about the number of projected incumbent workers in the project narrative; therefore, the evaluators are unable to compare the performance target with the actual outcomes with the more accurate estimation based on the DOL definition.

Table 6. CU Succeed Project Performance Outcomes

	Outcome Measures	Actual Outcomes		Performance Targets at Y2		Target Met
		n	% a	n	% b	
1	Total unique participants served	1019	--	450	--	√
2	Total number of participants who have completed a TAACCCT-funded program	1016	100%	405	90%	√

	Outcome Measures	Actual Outcomes		Performance Targets at Y2		Target Met
		n	% [a]	n	% [b]	
3	Total number of participants still retained in their program of study or another TAACCCT-funded program	0	0%	5 [c]	1%	
4	Total number of participants completing credit hours	111	1%	405	90%	
5	Total number of participants earning credentials	1016	100%	450 [d]	100%	√
6	Total number of participants enrolled in further education after grant-funded program of study completion [e]	0	0%	105	26%	
7	Total number of participants employed after grant-funded program of study completion [e]	41	4%	260	64%	
8	Total number of participants retained in employment after program of study completion [f]	21	51%	235	90%	
9	Number of participants employed at enrollment who received a wage increase post-enrollment	277	27%	40	9%	√

[a] The denominator for calculating the percentage was 1,019; otherwise is noted.
[b] The denominator for calculating the percentage was 450; otherwise is noted.
[c] The grant writer originally set up the performance target by adding the number of participants retained from Years 1 to 4; however, to evaluate the extent to which the CU Succeed project has an effect on retention rate, it is more appropriate to set the performance target based on the number of participants retained as of the end of the performance period, which was 5 and is used for the evaluation.
[d] The total number of participants earning credentials should not be greater than the number of participants served. In the program narrative, the target was set as 475, which violates the rule. For the evaluation, the target was revised as 450 which equals to the number of participants served.
[e] Given the definition, the denominator for calculating the percentage was the number of program completers (Indicator 2).
[f] Given the definition, the denominator for calculating the percentage was the number of participants employed after program completion (Indicator 7).

Below is the list of indicators that did not meet the performance targets:

- **Outcome Indicator #3:** By the end of the performance period, none of the participants were retained in any of the grant-funded program as compared to the target of 1%. This is because all but three participants left their program of study without completing the program requirements.

- **Outcome Indicator #4:** One percent (111 out of 1,019) of the participants earned credits in comparison to the target of 90%. This outcome is below the target because the project made a major shift in the direction of program offerings during the early planning and development stage. That is, after meeting with local industry partners, the project team recognized that there is an urgent need in the region to provide short-term

programs that allow workers to complete the training quickly while they remain on the job. As a result, the CU Succeed project team focuses on offering non-credit programs that allow workers to earn industry recognized credentials quickly while gaining the skills set needed to perform better in their jobs. Actually, of 1,019 participants recruited, 822 (81%) were enrolled in the non-credit programs.

- **Outcome Indicator #6:** None of the program completers enrolled in further education (TAACCCT grant funded or not) as compared to the target of 26%. It should be noted that, with limited resources, the CU Succeed project team only tracks participants who continued their education within M State after completing a program of study; hence, it is unknown how many participants continued their education outside of M State.

- **Outcome Indicator #7:** Four percent (114 out of 1,016) of the program completers gained employment during the first quarter after exiting their program of study in comparison to the target of 64%. It should be noted that this outcome may be underestimated given the time lag between when the employment and wage data became available for DEED to conduct the analysis, especially for Year 4 participants. Additionally, per the DOL, the estimation should be based on the number of non-incumbent workers who gained employment during the first quarter after existing their program of study. The DOL's definition would result in 81% (114 out of 140[4]) of the incumbent workers receiving wage increases. However, there is no information available about the number of projected incumbent workers in the project narrative; therefore, the evaluators are unable to compare the performance target with the actual outcomes with the more accurate estimation based on the DOL definition.

- **Outcome Indicator #8:** 51% (21 out of 41) of the participants who gained employment were retained as compared to the target of 90% (827 out of 827). As discussed in Indicator #7, this outcome may be underestimated due to time lag between when the employment and wage data became available for DEED to conduct the analysis.

2. To what extent does the CU Succeed program have an impact on project participants (Study 2)?

Various data sources, including project staff interview, partner survey, and participant interview, were collected to inform this evaluation question. Findings from each data source are summarized in this section.

Project Staff Interview. During the 2017 interview (Year 3), project staff were asked to provide their perspectives regarding the impact of the CU Succeed project on student success.

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[4] Number of non-incumbent workers reported here is based on the combination of student self-report and DEED data. DEED data was the primarily data sources for participants who provided their social security number to M State during the intake process. For those who did not provide their social security number, participant self-reported data were used to determine their employment status upon program entry. Of all participants, only 34% (n = 347) of participants provided their social security number. Of those, 132 (38%) were non-incumbent workers. Of those who did not provide their social security number (n = 672), eight were non-incumbent worker upon program entry based on participant self-report.

Interview participants shared that the CU Succeed project has been successful and has made a positive impact on participants in terms of their career development. "We've provided a lot of training and we've provided a lot of certificates to students that will give them access to better careers and provide them with better options in the future," one interviewee commented. "This grant isn't just about sitting in a classroom… we're improving lives," another interviewee shared. Staff indicated that the number of certifications awarded to grant participants and high completion rate provide substantial evidence for program impact.

When asked about their perspectives regarding the impact of the CU Succeed project on the local workforce, project staff were unanimous in their belief that the grant has had a profoundly positive effect upon the local business community. "I feel very positive. A lot of our business is repeat business, businesses who have trained with us and have continued coming back for more," one interviewee shared. Another interviewee commented, "We've put so much time into the customization — into not making the trainings any longer than they need to be and being respectful to the needs of people and businesses." Project staff communicated that the trainings provided through the CU Succeed project have resulted in a local workforce that is highly qualified and highly skilled, improving the efficacy of employers and employees across the region. Describing the greater impact of the CU Succeed project, a member of the project staff shared,

> *I think the grant [impacted the local workforce] right from the start. There are always entities out there who say they care about training but just want to check a box off a list and do the bare minimum. But there are also companies realizing [what CU Succeed program is offering] is pretty special- businesses can think about the big picture of their organization for the individuals working for them. I think this is fantastic for the area. What we've done has been pretty darn successful. Last year I wasn't sure if I could say this because I was still nervous about hitting our goals, but we worked hard and I think we've planted a lot of seeds that are about to grow into a field.*

Partner Survey. Findings from the partner survey were consistent with the findings from the interviews with project staff. In the Partner Survey, partners were asked to rate three items regarding the impact of the CU Succeed program on construction and utilities industries and local workforce development. As shown in Figure 3, the majority of the partner respondents reported positive views regarding the value of the CU Succeed programs in the construction and utilities industries. While the ratings regarding program impact on meeting industry needs and preparing quality worker for the industries remained stable from 2016 (Year 2) to 2018 (Year 4), partners gave a noticeable high remark on the contribution of the CU Succeed programs on local workforce development by the end of grant Year 4.

% of Partner Respondents *Agreed* or *Strongly Agreed that...*

The CU Succeed project offers construction and utilities programs that meet industry needs. — 66.7% / 66.7%

CU Succeed programs prepare workers with the knowledge and skills needed to be successful in the construction and utilities industries. — 66.7% / 66.7%

CU Succeed programs support local workforce development. — 66.7% / 90.0%

■ December 2016 (n = 9) ■ February 2018 (n = 12)

Figure 3. Partner Perspective of Program Impact

Participant Interview. Project participants were asked to share their perceived program impact on their career development and growth during the 2017 data collection. Participants shared that they believe their participation in CU Succeed training programs has increased their professional abilities and facilitated their ability to meet their career goals. Interviewees reiterated the value that they place upon having opportunities to participate in hands-on learning and to engage with professionals from across different backgrounds and industries during CU Succeed trainings. "Hands-on training is the best possible means of training for people in [the construction and utilities field]," commented a participant.

> *In our industry, people learn most through hands-on training and experiences that engage them, not through PowerPoint presentations. The mobile trailers are such a better experience than a lecture. I think we have all found the experience very, very valuable. It puts the person in a situation where they can experience the content. They teach you how to step into a harness and let you practice, same for using a scaffold, gauging hydraulic pressure, or anything else that you can think of.*

3. How does the CU Succeed program work to support participant outcomes (Study 3)?

Various data sources, including project staff interview and participant interview, were collected to inform this evaluation question. Findings from each data source are summarized in this section.

Project Staff Interview. During the 2017 interview, project staff were asked to discuss any strategies that they believe have proven particularly effective in support student success. Project staff

shared that, in addition to the hands-on component and the customized and mobile nature of the CU Succeed programs themselves, being flexible and responsive to the industry's needs are the essential elements supporting the success of the grant. "In a nutshell, we have proven that we can teach anything, anywhere," reported one such member of the project staff. "If there is something that someone needs, we can take it to them however they need it." Another interviewee shared,

> *I would say the biggest thing we have done, strategy-wise, is that we haven't gone out [into the industry] and assumed that we have the answers as far as what people need. We've been open to having conversations [with businesses] and letting training and curriculum develop as a result of partnership…The beauty of [CU Succeed] and how we have done this is in its partnerships. If you develop a true partnership, knowing that you're not experts and neither is the organization you're working with, but knowing that if you work together you can become that, and really serve the region and the students, you can be successful. The best strategy we've had is getting outside of the box and do not assume that the traditional ways that we've educated people will work.*

Participant Interview. During the 2017 participant interview, participants were asked to identify which aspects of the trainings they participated in that they consider the most valuable and to describe why this is the case. Interview participants emphasized the value of receiving opportunities to engage in high-quality hands-on training, expressing that this approach to learning works best for the types of students and professionals who are interested in careers in construction and utilities fields. "For me, the most valuable [aspect of the training] was getting to look at the accident site and just observe it as I would if I went through one in real life," reported an interviewee.

> *[The accident site] was set up exactly like one that, someday, I may have to go through in my job. I didn't have a list of things to look for; there weren't any boxes to check with a pencil or a guide. I just had to go in myself and take a look at the site, and take everything in. I thought it was a real eye-opener and it made me realize all the things you need to pay attention to. For me, it was extremely important to have that hands-on training and truly experience the site. It was perfect for me.*

Participants also indicated that having opportunities to collaborate with other professionals was a rewarding experience. Interviewees described their conversations with other training participants as extremely valuable, reporting that they helped to facilitate consideration of new ideas and perspectives. "The most valuable part [of the training was] having the opportunity to share information in teams," said one interview participant. "To discuss, 'Hey, here's what we were thinking, here's why we pursued this line of questioning.' We were able to share those experiences, and the opinions and experiences were different enough that it was very valuable."

Finally, participants identified the mobility of CU Succeed trainings as a significant program strength, allowing M State staff to make trainings more accessible to professionals across broad geographical distances. One participant shared,

The mobility of the trailers is really handy and has worked out really well for us, and I can see a lot of other applications for it for future events and trainings. I think that is so worthwhile just in itself. There's just a lot of opportunities for them to get the training out to individuals like myself who might not be able to [attend] otherwise, to travel across the state [to trainings].

Another interview participant commented, "The ability to have a mobile site is incredible. Having a trailer that we can use to go through the training in a hands-on environment is so important for the workers that we have."

Chapter 5: Implementation Evaluation Design

This chapter elaborates on the formative questions presented in Chapter 1, followed by a detailed description of the formative evaluation design, methods, and data analysis plan.

Evaluation Design

The implementation evaluation examined the extent to which the CU Succeed project's implementation strategies, services, and activities (i.e., program outputs) have been implemented as planned (i.e., adherence) and how well (i.e., service quality and participant responsiveness). Although full implementation of the original program is desired, McREL evaluators recognize that, in practice, model modification (i.e., program adjustments and strategic refinement) may occur to support and enhance the project's feasibility and sustainability (Century et al., 2010; Fixsen, Naoom, Blase, Friedman, & Wallace, 2005). However, any deviation (e.g., low implementation levels or frequent modification) from the originally designed program also creates a potential threat to program fidelity (Century et al., 2010). When a program is implemented with low fidelity, it is unclear whether the successes or failures are due to the program itself or a lack of fidelity in implementation. Therefore, the focus of the CU Succeed project's implementation evaluation was to measure and monitor all implemented activities (whether it is by original design or modification) throughout the grant period. This design also allowed evaluators to provide timely and actionable recommendations for project staff regarding improvements and refinements for strengthening the program that balanced implementation fidelity and data-based modifications to enhance the potential for sustainability while still maintaining the rigor of the impact analysis.

Overall, three overarching formative evaluation questions and subquestions guided by the TAACCCT Round 4 SGA were examined. Specifically, the formative evaluation (1) analyzes the steps taken by CU Succeed project team to create and implement the CU Succeed project, (2) assesses the operational strengths and weaknesses of the project, and (3) examines the sustainability of the project beyond the life of the grant.

To address the first question: *How were the key strategies and activities of the project implemented?*, evaluators examined the strategies and processes that the CU Succeed project team implemented to support student outcomes as described in the logic model (see Chapter 1). The strategies examined include:

- Strategy 1. Provide career pathways using existing and new portable, stackable and latticed industry-recognized credentials.
- Strategy 2. Enhance student career and wrap-around supportive services.
- Strategy 3. Develop online and technology-enabled hands-on mobile training opportunities.
- Strategy 4. Enhance integration and contextualization of remedial education and soft skills training.
- Strategy 5. Enhance and expand outreach and recruitment of TAA-eligible and similar adults.

- Strategy 6. Incorporate transferability and articulation into career pathways.
- Strategy 7. Ensure timely data collection, reporting, and analysis.

For the second question: *To what extent were the key project strategies and activities implemented with fidelity? What were the operational strengths and weaknesses of the project after implementation?,* fidelity assessments were conducted to document, assess, and monitor CU Succeed project activities and outputs. The fidelity measure is a key evaluation tool that was used to monitor the project's progress, strengths, weaknesses, and achievement throughout the implementation years. Details on the fidelity assessment is described in detail under the Fidelity Assessment section in this chapter.

For the third question: *To what extent is the program sustainable and transferable?,* evaluators explored and described how the successful program components will be sustained beyond the life of the grant, and identified the components and strategies that can be duplicated in other settings and programs.

Lastly, the following implementation questions specified in the TAACCCT Round 4 SGA were also answered:

SGA.Q1. How was the particular curriculum selected, used, or created?

SGA.Q2. How were the programs and program design improved or expanded using grant funds?

SGA.Q3. What delivery methods were offered?

SGA.Q4. What was the program's administrative structure?

SGA.Q5. What support services and other services were offered?

SGA.Q6. Was career guidance provided and if so, through what methods?

SGA.Q7. Did the grantees conduct an in-depth assessment of participants' abilities, skills, and interests to select participants into the grant program? What assessment tools and processes were used? Who conducted the assessment? How were the assessment results used? Were the assessment results useful in determining the appropriate program and course sequence for participants? Was career guidance provided and if so, through what methods?

SGA.Q8. What contributions did each of the partners make in terms of (1) program design, (2) curriculum development, (3) participant recruitment, (4) training placement, (5) job placement, (6) program management, (7) leveraging of resources, and (8) sustainability planning?

SGA.Q9. What factors contribute to partners' involvement or lack of involvement in the program? Which contributions from partners were most critical to the success of the grant program? Which contributions from partners had less of an impact?

Fidelity Assessment

To understand the fidelity of project implementation, evaluators developed a fidelity assessment tool to examine three aspects of project implementation: (1) *adherence*, (2) *quality*, and (3) *participant responsiveness*. Adherence focused on the "structural" aspects of implementation, while quality and participant responsiveness focused on the "procedural" aspects of implementation.

Adherence

By definition, *adherence* refers to the extent to which the critical components of an intended program are present when it is enacted (Century et al., 2010). McREL evaluators collaborated with the project team closely to develop an adherence form that assesses the level of implementation of the modified workplan[5] to evaluate the extent to which the CU Succeed project team has made progress toward full implementation over time. The adherence form included a total of 34 adherence indicators (see Table 7 for the number of indicators identified across the implementation areas), and project staff used the form to self-evaluate their own progress in implementing the modified project work plan on a quarterly basis.

In terms of the assessment method, each adherence indicator was rated as 0 (No/Not Yet Implemented) or 1 (Yes/Implemented). After each assessment was completed, a sum score (Adherence score) was calculated by adding all of the individual ratings together presenting the project's implementation status.[6] Percentiles[7] was then calculated to present the CU Succeed project's progress toward full implementation within each implementation area as well as the overall implementation. As part of the adherence assessment, any modification made to the project plan and reasons for the modification were also documented.

Table 7. Numbers of Adherence Indicators Across Implementation Areas

Implementation Area	Number of Indicators Identified
Strategy 1. Provide career pathways using existing and new portable, stackable and latticed industry-recognized credentials	7
Strategy 2. Enhance student career and wrap-around support services	2
Strategy 3. Develop online and technology-enabled hands-on mobile training opportunities	14
Strategy 4. Enhance integration and contextualization of remedial education and soft skills training	1
Strategy 5. Enhance and expand outreach and recruitment of TAA-eligible and similar adults	5

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[5] During the planning and development phase of the grant, the CU Succeed project team made major modifications to the original program work plan. Hence, the adherence indicators were based on the modified work plan instead of the original work plan.

[6] There were 34 indicators; hence, the lowest score possible for the overall implementation was 0, and the highest score possible for the overall implementation was 34.

[7] Percentiles were calculated using the following formula: (sum score / highest score possible) * 100.

Implementation Area	Number of Indicators Identified
Strategy 6. Incorporate transferability and articulation into career pathways	2
Strategy 7. Ensure timely data collection, reporting, and analysis	3
Total	**34**

The adherence form was finalized during the first quarter of grant Year 3, and the first assessment was completed by project staff based on the progress made during the first two years of the grant. During grant Year 3, the adherence assessment was conducted on a quarterly basis. A total of five adherence assessments were conducted between grant Year 1 and 3 in the following timeline:

T0: September 2015 (fourth quarter of grant Year 2)
T1: December 2016 (first quarter of grant Year 3)
T2: March 2017 (second quarter of grant Year 3)
T3: June 2017 (third quarter of grant Year 3)
T4: September 2017 (fourth quarter of grant Year 3)

Quality

Because a program's effectiveness is impacted by the quality in which it has been implemented, *implementation quality* was measured as part of the fidelity assessment using the survey data collected from project participants. A total of 17 items from the Participant Survey that assess participants' perceptions of the quality of implementation across specific project components were included in the quality assessment. Five areas of interest were assessed, including (1) quality of training materials and curriculum (4 items), (2) quality of instruction (9 items), (3) quality of technology-enabled learning (1 item), (4) quality of student support services (2 items), and (5) global quality (1 item). From these data, an overall *Quality Index_Student Report* (QI_SR) score was calculated to better understand participant perceptions at the program level over time.

To calculate the QI_SR scores, individual responses on each survey item were first reclassified into two categories: endorsed response and not-endorsed response. Because not all items were measured on the same scale, the methods to reclassify individual responses were presented in the appendix. Frequencies were then calculated to present the percentage of participants or partners who endorsed the items. Percentages were then converted into scale scores of 1.00 (0.00% to 9.99%) to 10.00 (90.00% to 100.00%). A sum score was calculated for the QI_SR score. Percentiles[8] were also calculated and reported. Quality assessment was conducted on an annual basis between grant Years 1 and 3 using the data collected within each grant year.

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[8] Percentile was calculated using the following formula: (sum score / highest score possible) * 100.

Participant Responsiveness

Participant responsiveness was a measure of participants' response to and engagement in project activities. It was hypothesized that the higher the level of enthusiasm and engagement among stakeholders, the better the outcomes will be. Evaluators utilized data collected from the Participant Survey to assess participant responsiveness. A total of five items were included in the assessment; these items assessing participant responses in the area of curriculum and instruction (see Appendix for the list of items). From these data, an overall *Participant Responsiveness Index_Student Report* (PRI_SR) score was calculated to better understand participants' perceptions at the program level over time. The same method used to calculate the QI_SR score was used to calculate the PRI_SR score, followed by calculations of percentiles. Assessment of participant responsiveness was conducted on an annual basis between grant Years 1 to 3 using the data collected within each grant year.

Taken together, the fidelity assessment provided information related to the CU Succeed project's strengths and weaknesses; it also provided actionable and timely information to strengthen the quality of implementation. As such, it was utilized as a tool to guide strategic planning that supported continuous improvement and ensured that all of the project elements were implemented as planned within the performance period.

Data Analyses

For the fidelity assessment, descriptive statistics (e.g., frequencies, percentages, means, standard deviations, or cross-tabulations) were conducted, as appropriate. Before data analyses were performed, McREL evaluators screened the data for data entry errors and improbable responses. Additionally, a variety of qualitative data sources were collected throughout the performance period. These data are used to amass a body of contextual knowledge about the CU Succeed project from multiple stakeholders and help ensure a comprehensive understanding of how and why the project results were achieved. Further, the triangulation of qualitative and quantitative data enables evaluators to corroborate patterns and/or identify discrepancies in data obtained through mixed methods. The general approach to analyzing qualitative data includes the following concepts from interview analyses: *Life world*, to enter and understand what is being expressed by the interviewee; *Meaning*, to understand and interpret the meaning of central themes; *Specificity*, to obtain descriptions of specific situations; *Focus*, to focus the interview on themes as they emerge; *Qualitative knowledge*, to obtain qualitative knowledge as expressed by the interviewees; and *Deliberate näiveté*, to be open to any new and unexpected phenomena (Kvale, 1996). As appropriate, qualitative data were analyzed using NVivo software, and prevalent themes and emerging issues were identified. Thematic analysis focused on identifying words or phrases that summarize the information being shared in the interviews. As such, data were segmented into passages through coding and emerging themes were identified, then the data were reviewed for replicating categories. These categories were given broad codes; finer coding was employed to identify patterns emerging within each coded set. Themes were then summarized by salient, prevalent issues.

Chapter 6: Implementation Evaluation Findings

This section summarizes the implementation evaluation findings by synthesizing the data collected from various data sources during grant Year 3. Findings are presented to address the implementation questions and subquestions followed by the questions specified by the DOL's SGA. Evaluation findings based on data collected between grant Years 1 and 2 were reported in the interim evaluation report—Minnesota State Community and Technical College's Construction and Utilities Succeed (CU Succeed) Project Evaluation: Interim Report (October 2014—September 2016) (Ho & Knoster, 2017).

1. How were the key strategies and activities of the project implemented?

In this section, evaluators drew upon the findings from data collected during grant Year 3, including project staff and partner interview, participant focus groups/interview, Partner Survey, Participant Survey, and project records to address the status of implementation across various project strategies. Findings focus on the CU Succeed project's progress, successes, and challenges during the first two years of the grant. Findings are summarized by project strategy below.

Strategy 1. Provide Career Pathways Using Existing and New Portable, Stackable and Latticed Industry-Recognized Credentials

Implementation Progress. During the first two years of the grant, the CU Succeed project team made a major modification to the original plan by focusing on the identification of existing curriculum, modification of the existing programs, and development of short-term non-credit-bearing programs instead of credit-bearing programs in the field of construction and utilities in order to meet the needs of the local business partners. During grant Year 3, the CU Succeed project team finalized the identification, modification, and development of the CU Succeed programs of study.

As shown in Table 8, a total of 47 programs of study were offered for the grant participants. Seventeen (36%) programs existed before the grant and were enhanced using grant funding (i.e., enhanced); 23 (49%) were existing curriculum developed from the industry (i.e., existing curriculum from industry); and seven (15%) programs were newly developed using grant funding. All programs, credit or non-credit based, will lead to industry-recognized credentials after completing the required course(s). Table 9 shows the career pathways for each program of study.

Table 8. The CU Succeed Project's Programs of Study

Programs of Study	Credit Hours	Program Length (contact hours)	Curriculum Development
Commercial Driver's License (CDL) Certificates (Trained by Using Mobile CDL[9] Trailer)			
CDL Class A	0	4 to 5 weeks (160)	Enhanced
CDL Class B	0	1 week (32)	New
CDL Annual Training	0	1 day (4)	New
Safe Practices for CDL Operations	0	1 day (1)	New
CDL I	1	2 weeks (15)	Enhanced
CDL II	1	3 weeks (30)	Enhanced
Gas Field Training I	4	16 weeks (120)	Enhanced
Safety Certificates (Trained by Using Mobile Safety [10] Trailer)			
Occupational Safety and Health Administration (OSHA) 30 Construction (credit-based)	2	16 weeks (30)	Existing curriculum from Industry
Occupational Safety and Health Administration (OSHA) 30 General Industry (credit-based)	2	16 weeks (30)	Existing curriculum from Industry
OSHA 30 Construction (non-credit based)	0	4 days (30)	Enhanced
OSHA 30 General Industry (non-credit based)	0	4 days (30)	Enhanced
Mining Safety and Health Administration (MSHA) Part 48 Annual Refresher Training (ART)	0	1 day (8)	Existing curriculum from Industry
MSHA Part 48 New Miner	0	3 days (24)	Existing curriculum from Industry
MSHA Part 46 ART	0	1 day (8)	Existing curriculum from Industry
MSHA Part 46 New Miner	0	3 days (24)	Existing curriculum from Industry
Confined Space Refresher or Awareness	0	1 day (2-4)	Existing curriculum from Industry
Confined Space: Permit Required	0	1 day (4-8)	Existing curriculum from Industry
Confined Space: Competent Person	0	1 day (8)	Existing curriculum from Industry
Electrical	0	1-2 days (4-12)	Enhanced
Ergonomics – Job Site	0	1 day (2-4)	New
Fall Protection & Prevention	0	1 day (4)	Enhanced
Fall Protection: Competent Person	0	1-2 days (8-16)	Existing curriculum from Industry
HazComm/Right to Know	0	1 day (4)	Enhanced

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[9] One trailer is purchased with three simulators within the trailer.
[10] One trailer is purchased.

Programs of Study	Credit Hours	Program Length (contact hours)	Curriculum Development
Hazmat Awareness	0	1 days (4)	Existing curriculum from Industry
HazWoper Awareness	0	1 day (2-4)	Existing curriculum from Industry
HazWoper Refresher	0	1 days (8)	Existing curriculum from Industry
HazWoper Initial Training	0	3-5 days (24-40)	Existing curriculum from Industry
Mock Accident Investigation	0	1 day (2-4)	New
Respiratory Protection	0	1 day (2-4)	Existing curriculum from Industry
Rigging Awareness	0	1 day (2-4)	New
Safety Inspections & Audits	0	1 day (4)	Enhanced
Scaffolding: Competent Person Training	0	1 day (8)	Enhanced
Scaffolding: Erector Training	0	1 day (4)	Enhanced
Scaffolding: User Training	0	1 day (4)	Enhanced
Scaffolding Safety	0	1 day (2-4)	Enhanced
Trenching & Excavating	0	1 day (4-8)	Enhanced
Precision Measurement and Blueprint Reading (PM/BR) Certificate (Trained by Using Mobile Precision Measurement Trailer)			
Certified Production Technician (CPT) (non-credit): Safety Awareness	0	5 days (40)	Existing curriculum from Industry
Certified Production Technician (CPT) (non-credit): Maintenance Awareness	0	5 days (40)	Existing curriculum from Industry
Certified Production Technician (CPT) (non-credit): Quality & Continuous Improvement	0	5 days (40)	Existing curriculum from Industry
Certified Production Technician (CPT) (non-credit): Manufacturing Process & Production	0	5 days (40)	Existing curriculum from Industry
CPT (credit): Safety Awareness	2	2 weeks	Existing curriculum from Industry
CPT (credit): Maintenance Awareness	2	2 weeks	Existing curriculum from Industry
CPT (credit): Quality & Continuous Improvement	2	2 weeks	Existing curriculum from Industry
CPT (credit): Manufacturing Process & Production	2	2 weeks	Existing curriculum from Industry
Blueprint Reading: Construction	0	36 hours	Enhanced
Blueprint Reading: Maintenance	0	36 hours	Enhanced
Other			
Plus (+) Certificate	0	1 day (3)	New

Note. All programs are offered in a face-to-face format, except the Plus (+) program that is offered online. CPT contains four components: safety, quality assessment, maintenance awareness, and manufacturing process and production. Each component if offered with two credits per session or non-credit.

Table 9. Career Pathways by Program of Study

Programs of Study	Description
Commercial Driver's License (CDL) Certificates	
CDL Class A	Participants can be employed by our business partners, or enrolled in any of the following programs at M State concurrently:
CDL Class B	• Gas Utility Construction and Service Diploma
CDL Annual Training	• Electrical Lineworker Diploma & AAS
Safe Practices for CDL Operations	
CDL I	
CDL II	
Gas Field Training I	
Safety Certificates	
Occupational Safety and Health Administration (OSHA) 30 Construction (credit-based) And Occupational Safety and Health Administration (OSHA) 30 General Industry (credit-based)	Participants can be enrolled in any of the following programs at M State concurrently: • Construction Management AAS • Plumbing Diploma & AAS • Refrigeration Diploma • Electrical Technology Diploma • Heating Ventilating and Air Conditioning Diploma • Gas Utility Construction and Service Diploma Participants can be employed by our business partners.
OSHA 30 Construction (non-credit based)	
OSHA 30 General Industry (non-credit based)	Participants can be employed by our business partners.
Mining Safety and Health Administration (MSHA) Part 48 Annual Refresher Training (ART)	Participants can be employed by our business partners, or enrolled in any of the following programs at M State concurrently:
MSHA Part 48 New Miner	• Construction Management AAS
MSHA Part 46 ART	• Diesel Technology Diploma & AAS
MSHA Part 46 New Miner	• Survey Technician Diploma
Confined Space Refresher or Awareness	Participants can be employed by our business partners, or enrolled in any of the following programs at M State concurrently:
Confined Space: Permit Required	• Gas Utility Construction and Service Diploma
Confined Space: Competent Person Training	• Electrical Lineworker Diploma & AAS
Electrical	• Mechanical Drafting and Design Certificate, Diploma & AAS
Ergonomics – Job Site	• Construction Management AAS
Fall Protection & Prevention	• Diesel Technology Diploma & AAS
Fall Protection: Competent Person	• Survey Technician Diploma
HazComm/Right to Know	• Plumbing Diploma & AAS
Hazmat Awareness	• Refrigeration Diploma
HazWoper Awareness	• Electrical Technology Diploma
HazWoper Refresher	• Heating Ventilating and Air Conditioning Diploma
HazWoper Initial Training	
Mock Accident Investigation	
Respiratory Protection	
Rigging Awareness	
Safety Inspections & Audits	
Scaffolding: Competent Person Training	

Programs of Study	Description
Trenching & Excavating	
Scaffolding: Erector Training	Participants can be employed by our business partners, or enrolled in any of the following programs at M State concurrently: • Construction Management AAS • Electrical Lineworker Diploma & AAS
Scaffolding: User Training	
Scaffolding Safety	
Safety Inspections	
Precision Measurement and Blueprint Reading Certificates	
Certified Production Technician (credit- or non-credit) • Safety Awareness • Maintenance Awareness • Quality & Continuous Improvement • Manufacturing Process & Production Blueprint Reading: Construction Blueprint Reading: Maintenance	Participants can be employed by our business partners, or enrolled in any of the following programs at M State concurrently: • Gas Utility Construction and Service Diploma • Electrical Lineworker Diploma & AAS • Mechanical Drafting and Design Certificate, Diploma & AAS • Construction Management AAS • Diesel Technology Diploma & AAS • Survey Technician Diploma • Plumbing Diploma & AAS • Refrigeration Diploma • Electrical Technology Diploma • Heating Ventilating and Air Conditioning Diploma
Other - Online	
Plus (+) Certificate	Participants can be employed by our business partners, or enrolled in any of the following programs at M State concurrently: • Gas Utility Construction and Service Diploma • Electrical Lineworker Diploma & AAS • Mechanical Drafting and Design Certificate, Diploma & AAS • Industrial Maintenance Certificate & Diploma • Construction Management AAS • Diesel Technology Diploma & AAS • Survey Technician Diploma • Plumbing Diploma & AAS • Refrigeration Diploma • Electrical Technology Diploma • Heating Ventilating and Air Conditioning Diploma

During the interview in 2017 (grant Year 3), CU Succeed project staff explained that programs developed or expanded under the grant fall into two broad categories: credit-based and non-credit-based offerings. Credit-based programs are required to utilize industry-recognized credentials and adhere to industry standards to become fully accredited; therefore, ensuring alignment between program curricula and career pathways was the main focus when developing new or revising existing curricula for the programs. For the most part, project staff identified appropriate industry-recognized credentials that are aligned with the project objectives and goals and meet the needs of the grant participants, and instructors were responsible for updating and revising the

selected curricula to ensure that the contents are aligned with current industry standards. "We've been very sensitive in making sure our credentials are industry recognized, regionally and/or nationally, and in making sure we have faculty who are equipped to run those trainings," explained a member of the project staff. The project staff member further elaborated,

> *For our safety trainings, we have faculty who are trained in OSHA standards and procedures, like scaffolding training and electrical safety. Faculty have all been credentialed in those trainings. Our credentialing not only goes through what we're passing off to our students and participants—we also make sure that our faculty members are credentialed.*

Similar processes were used when selecting and modifying program curricula for non-credit based trainings; however, more customization was needed with non-credit based programs as compared to the credit-based programs. One interviewee commented, "[With non-credit based programs], we don't go through a [regular] curriculum [development] process. Rather, we work with specific business and industry partners to develop them as we go." Interview participants reported that the needs of project partners and their employees are diverse and constantly changing, necessitating a flexible and custom-tailored approach to training. A project staff member explained,

> *We customize our curriculum to meet partners' needs. In any one of our trailers, we could be [providing] training anywhere from 10 hours to 70 hours to 160 hours… We don't just host them at the same location in the same way over and over again. We are always trying to adjust the curriculum to make sure that we are meeting the needs of the businesses and the region that we're serving.*

Project staff shared that this customization of training offerings has facilitated the identification of previously unidentified industry needs and, subsequently, the development of entirely new courses and curricula. "We are constantly creating new certificates because the more we work with these companies, the more we learn about what [trainings] they need," said an interviewee.

> *Partners work with us and begin to trust in our trainings, and then they come to us with a new need… For example, we didn't offer any training in rigging at the beginning [of the grant] but now it has become a major component. We're constantly looking to help companies however we can and we never say no to a company without researching the trainings and seeing if it's feasible for us to offer it. Do we have the equipment? Do we have the knowledge? Do we have the instructor in place? If not, can we get them? If we can, let's go for it.*

Challenges. Project staff identified several challenges that they faced when recruiting participants for credit-based programs. Interview participants described one such challenge as "the nature of jobs we're training people for in themselves," explaining that even the most comprehensive training will ultimately prove fruitless if no one is interested in the career it is centered upon. "If you look around the state right now, you will see that a lot of credit-based programs are shutting down due to lack of student enrollment," elaborated an interviewee.

The jobs themselves have decent pay, but they're not the highest-paying jobs in our region, and I think people are starting to see more and more that they don't want the hours that come with them. They don't want to work the weekends, nights, and 24-hour shifts that a truck driver puts in, for instance. There is a huge industry demand for people to fill these jobs, but people are starting to lose interest in the lifestyle that comes with them. It's reaching the point where I think the wage for a truck driver would have to be much, much higher to encourage people to live that lifestyle. Unfortunately, that just falls beyond our scope.

Interview participants also indicated that finding ways to make trainings affordable is a significant challenge, and expressed a need to find a balance between program prices and the amount of time, energy, and resources that are needed to put into developing those programs. "We are having trouble figuring out how to offer trainings in a way that's affordable, because it's so time-consuming and labor-intensive to develop these types of programs," said a project staff member. "We know that our students don't necessarily have a lot of cash lying around, but putting these trainings together costs money and it has to come from somewhere." Another interviewee commented,

Somebody has to invest in the people who want to do this type of work. We have found some companies that want to pay for the training for their own employees, but there's still a large need in our region and no one identified to pay for the training to get people the skills that they need to do the jobs.

Successes. During the 2017 interview, project staff reported that a major success of the CU Succeed project has been the extent to which it has solicited feedback from and adapted to the needs of local businesses and industry. "Our customized training is what sets us apart," commented an interviewee. "We are flexible in creating our programs and we bring them right to the customer." Another interviewee shared,

We have done a great job in meeting our partners' needs. They don't have to shut down production for a whole day for people to travel to our trainings because we can come to them. I think the concept is still foreign to a lot of people... It's not something that employers typically think of when they think of training. They always have to send their people away to Minneapolis or a larger city to get the training. I think there's an excitement there, as a result of how we do things.

Project staff indicated that because of these efforts, M State has an increasing presence in the regional construction and utilities industry, explaining that local businesses are eager to collaborate and enroll their employees in training opportunities, especially on the non-credit based programs. "We are getting our name out there by giving people what they want and, for a long time, were unable to get," said one interviewee.

We are helping companies improve their employee retention and employee culture, and because of that we're growing fast and gaining recognition in this region. We're one of the only colleges in Minnesota that's gained a significant enrollment in working with incumbent workers right now, and certainly part of it is our philosophy.

Strategy 2. Enhance Student Career and Wrap-around Supportive Services

Implementation Progress. During staff interviews in 2017, CU Succeed project staff were asked to describe any student support services that occurred beneath the umbrella of the project. Interview participants reported that no such services have been developed and provided through the grant, instead indicating that the CU Succeed project leverages existing student support services provided through M State (e.g., the Spartan Center). "We have an adult basic education (ABE) program and a Spartan Center located at all of our campuses, which we offer to every one of our students that go through any programs with us," indicated an interview participant. "We refer all of our students to those services, should it be necessary." Another member of the project staff elaborated,

> *Based on the population that we serve, the support services that we offer are more [like] "career services" — helping a company with different things, such as culture, diversity training, or things like that. We've really been doing more of that with [companies] than we have bringing their employees on campus to use the Spartan Center, because they don't come on campus. They participate in the mobile training units, and the whole point of those units is that we bring training to participants wherever they work. Because of that, very few [participants] have ever needed any type of student support, so we just use existing support services [at M State] if the need ever arises. For the most part, however, it's not very applicable to the participants in a program like this.*

Challenges and Successes. Project staff did not indicate any significant challenges or successes having emerged in regard to providing wrap-around supportive services.

Strategy 3. Develop Online and Technology-enabled Hands-on Mobile Training opportunities

Implementation Progress. During grant Year 3, all three mobile training units, including (1) a Precision Manufacturing trailer, (2) a Commercial Driver's License trailer, and (3) a Safety trailer, were in place and were used with grant participants. Multiple interview participants characterized these trailers as the central and "fundamental" piece of the entire grant. One interviewee commented, "bringing our trainings to participants across vast distances and connecting professionals is the whole point of what we're trying to do here." Despite initial delays in acquiring functional and appropriate equipment with which to outfit the mobile training units, interview participants reported that the project is back on schedule and using the units to provide trainings across the state of Minnesota. Further, interview participants shared that program faculty have been fully trained in the implementation and use of mobile training units, increasing efficiency and effectiveness in hosting trainings.

Challenges. During grant Year 3, project staff did not indicate any significant challenges in regard to the implementation of technology-enabled hands-on mobile training opportunities.

Successes. Project staff shared the perspective that the greatest success of the CU Succeed project has been in completing the implementation of the mobile training units. Project staff

expressed pride regarding both the degree to which staff were able to overcome significant obstacles early on in the project and the extent to which the community has responded positively to receiving the opportunity to participate in mobile trainings. One project staff shared,

> *As a trainer, I am a big proponent of hands-on training, particularly in the construction and utilities field. The people in this line of work are the type who don't do well sitting in a classroom and just listening to lecture[s], and while anything you do involves some theory and some lecture, hands-on is one of the greatest aspects of reaching these individuals and passing along on knowledge. The ability to reach [these] kind of people is a huge success, maybe even our biggest success.*

Another project staff commented,

> *We overcame a lot of obstacles to reach this point. There were so many bumps in the road and hurdles to overcome, so the fact that we have everything up and running, that we have trained the instructors and are generating interest from employers who want to train their incumbent workers, is fantastic. I think that the college has done a great job showcasing that you can bring the training to a company with proper equipment and make it hands-on to have more impactful training, get more bang for your buck with your dollars you're spending, producing a safer industry and manufacturing culture. I think we've done a great job of that, I think we've gone above and beyond to make sure that we are pushing for the safest industry when we go there and do training. And the companies are buying in because they want to develop a safer culture.*

The success of the hands-on mobile training units was further confirmed by the survey data collected from partners and project participants. Through the Partner Survey administered in grant Year 4, partners answers questions regarding the quality of the mobile training unites. Specifically, when asked the extent to which they agreed that the CU Succeed program's mobile training units enhanced program participants' learning experience, 75% (9 out of 12) of the partner survey respondents *agreed* or *strongly agreed* with the statement. When asked the extent to which the CU Succeed programs' mobile training units made training opportunities accessible in the remote rural areas, 83% (10 out of 12) of the partner survey respondents *agreed* or *strongly agreed* with the statement.

Similarly, through Participant Survey, participants were asked to rate their experiences with the mobile training units. Of those who had the opportunities to be trained using the mobile training units ($n = 339$), 63% indicated that their experiences with the mobile training units enhanced their learning experience *very much*, and 25% reported that their experiences with the mobile training units *somewhat* enhanced their learning experience.

Strategy 4. Enhance Integration and Contextualization of Remedial Education and Soft Skills

Implementation Progress. In grant Year 3, project staff reported that the development of the online "soft skills" training program, also referred to as the "workplace readiness" program or

the Plus program, has been completed and that the program was ready for use. In terms the integration and contextualization of remedial education component, project staff reported that no form of remedial education supports or services were provided through the CU Succeed project; yet, such supports were available through M State's adult basic education (ABE) programs at two of M State's four campuses, through which struggling students could receive additional academic support should they choose to. One interviewee explained,

> *We have come across some individuals in the workforce who could benefit from remedial education, and it's offered to them [through ABE programs offered at M State], but our participants aren't really interested in it because it's not the reason they come to us. They are here for the hands-on training.*

Challenges. When asked about implementation challenges with the online Plus program, project staff indicated that it is currently underutilized, despite being developed in response to what industry and business partners characterized as a "dire need." Interview participants expressed frustration and disappointment with this result and commented, "We have just been unsuccessful finding employers who are willing to invest in it, even though they told us that it was their biggest challenge with their employees." In general, employers' and workforce agencies' reaction to the Plus program include, "It requires too much time," "There wasn't so much of a need as they originally thought," and "The content is a bit higher-level than what businesses have expected." While project staff continue to gather feedback from employers and workforce to re-evaluate the content of the Plus program, one project staff member shared,

> *An issue that has been identified with the [Plus program] is how long it takes — but how do you deliver this type of curriculum in a short time frame? Soft skills are skills that you develop over a lifetime. The older we get, the more we have learned. How do you teach critical thinking skills to someone who's working on a line in a manufacturing facility? These students aren't the type of students who want to spend hours in a classroom, they want to work with their hands. How do you teach them [soft skills] in a way that's meaningful to them? I think that's just the biggest challenge overall with soft skills [training]. We all say we're going try to teach it, but the reality is that no one's ever figured out how to do it in a way that works.*

In addition to re-evaluating the content and format of the Plus program, project staff have also explored alternative means to integrate soft-skills training into CU Succeed programs of study. For the most part, this has entailed incorporating soft-skills materials and content into other trainings and course offerings as time allows, even if only possible when "we have a few extra hours." An interview participant explained,

> *We have a core set of instructors that work with this grant, and we will give them information that businesses participating in trainings have shared with us regarding their employees' soft skills. Based on their need, our instructors will include time to talk to participants about leadership or cultural sensitivity, or anything else that might need to be covered. Coming at it from that angle,*

where we're not addressing one specific person, but rather the entire organization, seems to have helped in this regard. I even think we've gotten a lot of repeat business because of this approach.

Overall, project staff characterized the performance of the Plus program thus far as disappointing, with one interview participant describing it as an "unpleasant surprise." Project staff indicated that they are currently exploring strategies to encourage greater utilization of the Plus program, such as customizing the Plus program to fit the needs of individual employers; however, recognizing that employers seem to currently have little interest in this program, this effort will not be a priority for the time being.

Successes. Project staff members also expressed that, despite the degree to which the Plus program has been underutilized, the development of the Plus program itself is a significant success in the CU Succeed project's provision of soft-skills training. "I think it's a success because we have put a program in place and are moving in the right direction. Are we where we need to be yet? No. But it is a work in progress," one interviewee explained. Other interview participants offered similar perspectives, such as one who described the current Plus program as "a good starting point." Interviewees, for the most part, commented that the Plus program is far from complete and will continue to be refined as necessary to align with CU Succeed participant and partner needs. In this vein, another interview participant shared,

I think local employers, our regional partners, and our workforce partners are seeing us as providers of the "whole picture" thanks to our efforts [in developing the Plus program]. We're not just covering safety. We're not just CDL. We're not just precision manufacturing. We're showing that we go beyond just one thing – that we can be a great workforce partner for anyone and for anything that they're working through. I think that people are seeing us as very valuable to work with, and that is a great success. We can't keep up with all the calls that we're getting regarding just being a partner with local business, and I think this is connected to that.

Strategy 5. Enhance and Expand Outreach and Recruitment of TAA-eligible and Similar Adults

Implementation Progress. Table 10 is a summary of the recruitment and outreach efforts between October 2014 and September 2017.

Table 10. Summary of Awareness and Outreach Activities

Event Type	# Events			Target Population					
	Y1	Y2	Y3	Dislocated Worker	Incumbent Worker	TAA-eligible Participants	Long-term Unemployed	Veteran and Veteran Spouse	General Population
Conference	6	3	0		X				X
Business Awareness and Partner Outreach	39	201	150	X	X	X	X	X	X
Other community outreach (e.g., open house, high school presentation, presentation to faculty)	2	1	5	X	X		X	X	X
Total	**47**	**205**	**155**						

A total of 407 events occurred during the first three years of the grant, and the majority of the events were to cultivate new partnerships and maintain existing partnerships to support the implementation of the project, especially in the aspect of participant recruitment. These efforts put project on track in terms of meeting and exceeding the projected performance target in terms of participant recruitment. According to project records, a total of 1,019 unique participants were recruited and enrolled in CU Succeed programs of study, which means the project successfully recruited more than two times of the original recruitment target of 450.

Of those recruited, one percent (*n* = 10) were TAA eligible workers. Project staff indicated a low number of TAA-eligible participants have been recruited, primarily because of the low unemployment rate in the region. On the other hand, project staff have been successful recruiting underemployed individuals. For instance, one interviewee shared, "We have very, very few TAA-eligible individuals in our region…I would say we work more with underemployed people than we do with any other groups; people who need training to move up within their organization or advance in their field." Despite this, project staff shared that they have cultivated strong relationships with workforce center partners so that they can remain informed regarding local workers in need of training and re-employment. One interviewee explained,

> *[Workforce center partners] might get three or four [individuals] within a two- or three-week time period who have similar interests and similar likes, and they would bring us in and we will provide training to those unemployed people. Any training that we do for the unemployed is through the workforce centers.*

Challenges. Interview participants indicated that the greatest barrier to the recruitment of TAA-eligible and similar adults is the fact that there are very few of these individuals currently

residing in areas served by M State. "A lack of unemployment is our biggest obstacle to [recruiting TAA-eligible and similar adults]," shared project staff. "Our unemployment rate is so low that there is not a lot for us to draw from. It's strange to think of this as a challenge because obviously a lack of unemployment is a good thing." Other interview participants expressed similar opinions, noting that while lower unemployment rates are generally a positive phenomenon, it creates an obstacle in satisfying a central, underlying component driving TAACCCT grants.

Successes. CU Succeed project staff expressed confidence that, though enrollment numbers for TAA-eligible and similar adults may be low, they are adequately serving the needs of any such individuals residing across communities served by M State and the CU Succeed project. Interview participants emphasized that the strong and collaborative relationships between workforce center partners and CU Succeed staff will ensure that unemployed individuals who are interested in the construction and utilities fields are referred to CU Succeed programs.

Strategy 6. Incorporate Transferability and Articulation into Career Pathways

Implementation Progress. Project staff indicated that the incorporation of transferability and articulation into career pathways has taken place in two ways. Their first approach was to examine work that students have already completed prior to enrolling at M State. The work can emerge from academic experience, professional experience, and life experience as appropriate; yet, this method is less applicable for CU Succeed grant participants, as reported by project staff. "With the types of students we work with, most of them have never been educated in any way other than traditional high school or alternative learning centers… they typically aren't fans of education," commented an interview participant.

> They don't see themselves as people who should seek education, so our strategy with this group has been to be as responsive as we can and give them a taste of success with education and training. We have had some students who have pursued a degree at M State as a result of the trainings they've participated in. We see this [result] as planting seeds that can flourish when students pursue education and further education at some point in their life.

The second approach is to provide opportunities for students to use their current work experience for credit in future programs. Project staff shared that steps have been taken to facilitate future academic opportunities for grant participants. Specifically, interview participants indicated that credits obtained from any of the credit-based CU Succeed programs can be applied to relevant Associate of Applied Sciences (AAS) degree programs if participants want to enroll in these programs, and credits earned from the AAS degree programs can be transferred to Moorhead State University. "We take a look at our articulation agreements on a regular basis," reported a member of the project staff. "The college stays pretty updated on every one of our 2+2 agreements, as well, so that our students are able to get the most out of their time here in moving on to future programs, should they choose to do so."

Challenges. Interviewees shared that the process of incorporating transferability and articulation into career pathways is challenging in and of itself. "Whenever we're talking about

transferring credits between schools, things are going to get hairy," one staff member commented. "We just need to recruit more [students to enroll in] credit programs that can be transferable to four-year institutions," this interviewee commented, noting that this may be possible in the future should the CU Succeed project be proven successful.

Successes. Project staff indicated that they feel their efforts in incorporating transferability and articulation into career pathways have played a significant role in facilitating the number of students who have utilized credits for prior learning in their current program of study. "I think it's pretty special when you can look at a student's experience, see what he/she has done in their past, and utilize that and give him/her credit even if it isn't necessarily academic," expressed an interviewee. "Not all learning happens inside of a classroom."

Strategy 7. Ensure Timely Data Collection, Reporting, and Analysis

Implementation Progress. The Data sharing agreements between CU Succeed project and DEED as well as the data sharing agreement between CU Succeed project and McREL were established in Grant Year 2, which allowed the evaluators to access participant educational record and employment/wage data for the purpose of evaluation. Additionally, the evaluation team provided timely data (e.g., produce summary reports for all data collection activities) to help the project team making informed decisions regarding programming.

Challenges. Before the data sharing agreement between DEED and M State was established, CU Succeed project staff attempted to collect participants' employment and wage data by various means, including contacting participants through email and contacting employers to get employer verification. Multiple attempts were made to try to reach out to participants; however, the responses received back from participants and employers were minimal. As a result, CU Succeed project made a decision to use UI data as the primary data source for participants who provided the social security number to M State during the intake process. For those without the social security number in record, M State project staff continued to reach out to them to collect employment and wage data. .

Successes. Successfully establishing the data sharing agreements across all entities, including M State, DEED, and McREL, in grant Year 2 was a major success as it allowed the evaluation team to use validated employment and wage data for the evaluation.

2. To what extent were the key project strategies and activities implemented with fidelity? What were the operational strengths and weaknesses of the project after implementation?

This set of questions examines the fidelity of implementation—to what extent the project was implemented with high quality and a high level of participant engagement while adhering to the project work plan. Specifically, three aspects of implementation are examined: (1) *adherence*, (2) *quality*, and (3) *participant responsiveness*. This report includes data collected in grant Years 1, 2 and 3.

Implementation Adherence

Adherence documents the extent to which a project has been implemented as planned. A snapshot of the CU Succeed project's progress in implementing various strategies in Year 3 is presented in Table 11. Each item was rated as 0 (not yet implemented) or 1 (implemented). A total of five adherence assessments were conducted in the following timeline:

T0: September 2015 (fourth quarter of grant Year 2)
T1: December 2016 (first quarter of grant Year 3)
T2: March 2017 (second quarter of grant Year 3)
T3: June 2017 (third quarter of grant Year 3)
T4: September 2017 (fourth quarter of grant Year 3)

Table 11. Adherence Ratings by Strategy Over Time

Activities	Indicators of Implementation	Ratings				
		T0	T1	T2	T3	T4
1. Provide career pathways using existing and new portable, stackable and latticed industry-recognized credentials		**6**	**6**	**7**	**7**	**7**
1.1. Program start-up activities, including hiring project staff, procuring contracted services, purchase equipment.	1.1.1. Program advisory board was convened.	0	0	1	1	1
	1.1.2. Program offices was staffed, updated and operational.	1	1	1	1	1
1.2. Update interconnected credentials (as needed) and create new certificates that support students obtaining rapid employment and options for advanced training and career opportunities	1.2.1. Curriculum analysis was conducted to identify competencies and ensure alignment.	1	1	1	1	1
	1.2.2. Staff development/training was provided.	1	1	1	1	1
	1.2.3. New credentials for Precision Measurement/Blueprint Reading certificates programs were developed and approved.	1	1	1	1	1
	1.2.4. New credentials for Safety/OHSA certificates programs were developed and approved.	1	1	1	1	1
	1.2.5. New credential for CDL certificates programs were developed and approved.	1	1	1	1	1
2. Enhance student career and wrap-around supportive services		**2**	**2**	**2**	**2**	**2**
2.1. Update and implement student support and intervention services specific to target population and construction/utilities career pathways to increase retention of adult students	2.1.1. Student workplace opportunities identified and secured.	1	1	1	1	1
	2.1.2. Students are informed with resources and services provided by the Spartan Center during intake, and project staff will actively refer students to the Spartan Center, as appropriate.	1	1	1	1	1
3. Develop online and technology-enabled hands-on mobile training opportunities		**12**	**13**	**14**	**14**	**14**
3.1. Create online and mobile instructional models for Workplace Readiness, Safety/OSHA, Precision Measurement/Blueprint Reading, and CDL	3.1.1. Curriculum group was convened.	1	1	1	1	1
	3.1.2. Curriculum Designer was hired.	1	1	1	1	1
	3.1.3. Online portal was created and maintained for sharing course and curricula.	1	1	1	1	1
	3.1.4. OER and best practices from existing TAACCCT grantees were obtained.	1	1	1	1	1
	3.1.5. Curricula inventory and analysis were completed.	1	1	1	1	1
	3.1.6. Courses review and revision were conducted.	1	1	1	1	1

Activities	Indicators of Implementation	Ratings				
		T0	T1	T2	T3	T4
certifications, incorporating modularized curricula	3.1.7. Curriculum development plans, peer review and approval processes were established.	I	I	I	I	I
	3.1.8. Instructional model templates and best practices were established and updated.	I	I	I	I	I
	3.1.9. Faculty were provided with training materials, learning resources, and professional development.	I	I	I	I	I
	3.1.10. Online workplace readiness modular course was developed and offered to students.	I	I	I	I	I
	3.1.11. Mobile training units for Safety/OHSA certificate were designed, constructed, deployed.	I	I	I	I	I
	3.1.12. Mobile training units for Precision Measurement/Blueprint Reading certificate were designed, constructed, deployed.	0	I	I	I	I
	3.1.13. Mobile training units for CDL certificate were designed, constructed, deployed.	0	0	I	I	I
	3.1.14. Course modifications implemented as determined by quarterly data/outcome reporting as needed.	I	I	I	I	I
4. Enhance integration and contextualization of remedial education and soft skills training		**I**	**I**	**I**	**I**	**I**
4.1. Implement integrated remedial training with soft skills development	4.1.1. ABE remediation tutoring in math and English are provided to students who are in need of remedial education, as needed.	I	I	I	I	I
5. Enhance and expand outreach and recruitment of TAA-eligible and similar adults		**5**	**5**	**5**	**5**	**5**
5.1. Align outreach, recruitment and intake activities of workforce, industry, and nonprofit partners	5.1.1. Data sharing agreements with McREL were finalized.	I	I	I	I	I
	5.1.2. An inventory and analysis of outreach, recruitment and intake resources was created.	I	I	I	I	I
	5.1.3. Comprehensive and regional outreach, recruitment, intake plans/processes were established and updated; Supplemental materials were developed and distributed.	I	I	I	I	I
	5.1.4. Project-level strategic marketing plan was developed and Updated.	I	I	I	I	I
	5.1.5. Regional marketing plans was adapted; supplemental materials were developed and distributed.	I	I	I	I	I
6. Incorporate transferability and articulation into career pathways		**2**	**2**	**2**	**2**	**2**
6.1. Link M State training programs and competency-based assessments to facilitate access to four-year degrees at Minnesota State University Moorhead	6.1.1. Prior learning assessment modules were updated and deployed.	I	I	I	I	I
	6.1.2. Existing 2+2 agreements for students to proceed to four-year university and earn bachelor's degrees were evaluated and updated, as needed.	I	I	I	I	I

Activities	Indicators of Implementation	Ratings				
		T0	T1	T2	T3	T4
7. Ensure timely data collection, reporting, and analysis		1	2	2	2	3
7.1. Collect, track, analyze, and report on participant outcomes to DOL and stakeholders	7.1.1. DEED/MnSCU data sharing agreements confirmed. DEED provides employment and wage outcome for grant participants.	0	1	1	1	1
	7.1.2. Quarterly reports were submitted to DOL.	1	1	1	1	1
	7.1.3. Final findings shared with other MnSCU schools and other stakeholders and interested organizations (9/30/18)	0	0	0	0	0

After converting the ratings into percentiles, results are shown in Figure 4. Findings indicate that the project was at the 85th percentile in terms of full implementation by the end of grant Year 2, and was increased to the 97th percentile by the end of grant Year 3. The only incomplete item was— *Final findings shared with other MnSCU schools and other stakeholders and interested organizations*, which is expected given that the final findings would be shared by the end of grant Year 4, which is outside of the adherence assessment timeframe.
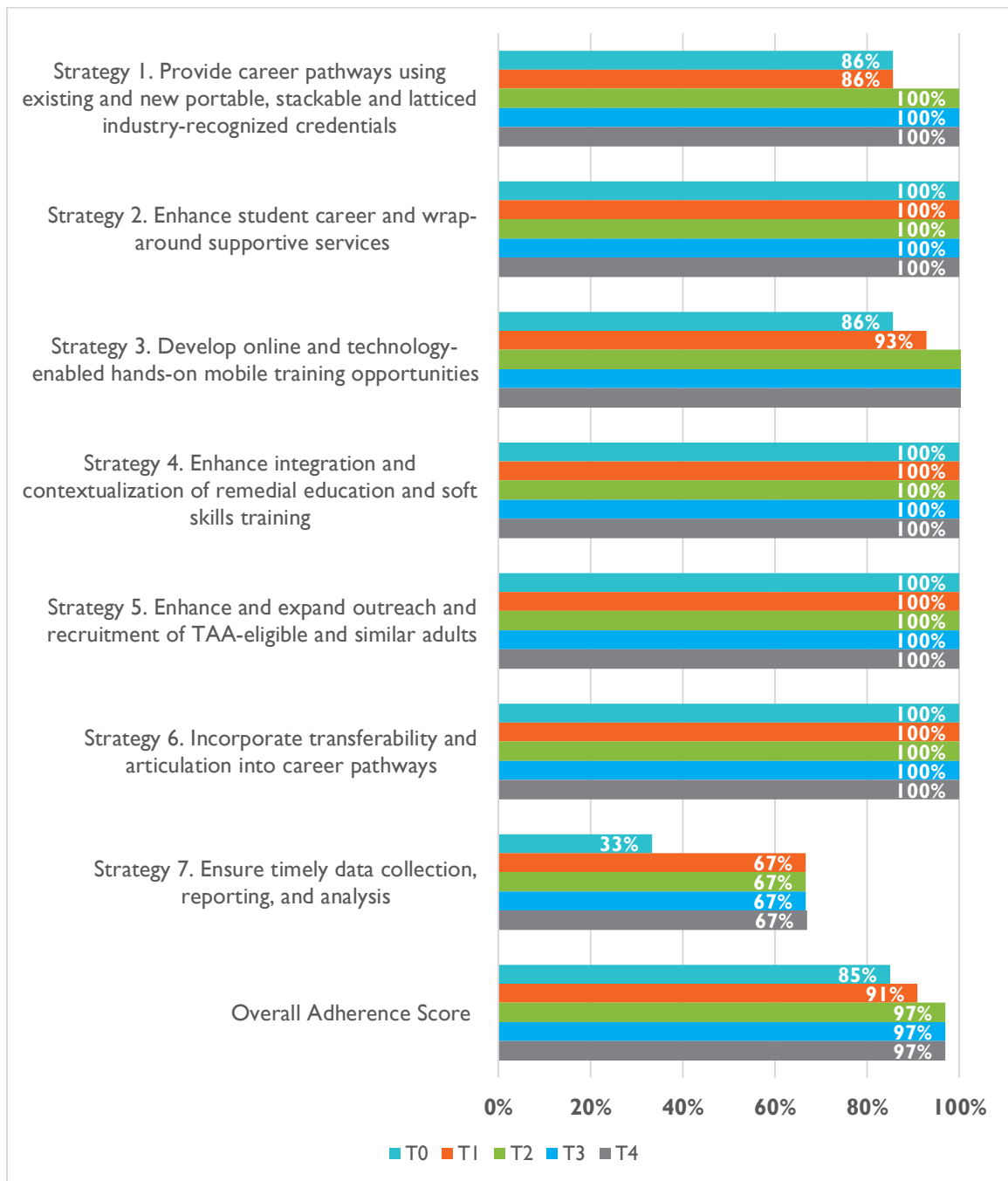
Note. The total score of each strategy was divided by the highest possible score.

Figure 4. Adherence Findings: Percentile of Reaching Full Implementation Over Time

Modification. The CU Succeed project team made several major modifications to the original project work plan during the planning and development stage. Modifications are summarized below.

- ***Program model was revised.*** According to the original project work plan, the Plus program (i.e., workplace readiness certificate) was conceptualized as a pre-requisite program before participants choose to enroll into training in one of the three areas of study: Safety/OSHA certificates, PM/BR certificates, and CDL certificates. However, after the grant was funded, the project team reviewed the curriculum inventory and decided to offer a workplace readiness course as an independent program of study. As shown in Figure 5, participants can choose to enroll in four types of certificate programs, and three of which would further lead to diploma and degree programs in various construction and utilities pathways.
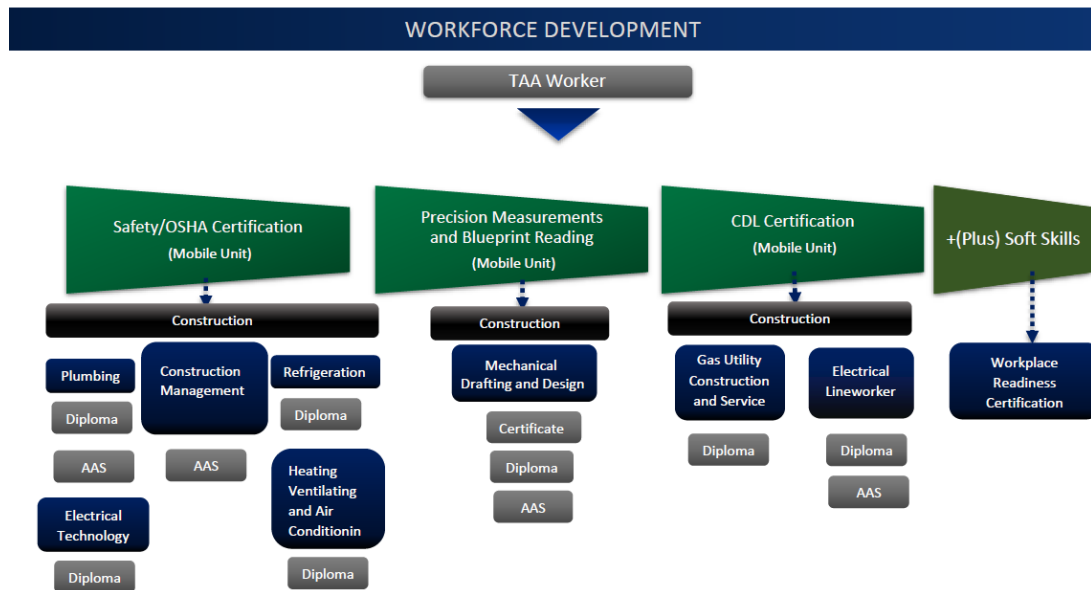

Figure 5. Modified CU Succeed Workforce Development Program Model

- ***Leverage existing resources at M State to provide wrap-around support services.*** The original project work plan included plans to develop career and support services inventory and provide training to staff to ensure participants receive wrap-around support services. After the grant was funded, the project team decided to leverage the existing resources from the Spartan Center at M State to ensure students have access to high quality support services as needed. The Spartan Center is staffed with well-trained professionals who are experienced in working with students and are knowledgeable about resources available for students. The support services are available for participants across all four M State campuses (i.e., Detroit Lakes, Fergus Falls, Moorhead, and Wadena). To ensure participants are aware and utilize the services, the

CU Succeed project staff introduce the Spartan Center to participants during the intake process and refer participants to the Center, as needed.

- ***Leverage existing resources (i.e., Adult Basic Education program) at M State to provide remedial education.*** The original project work plan included plans to develop an inventory and analysis of best practices of remedial educational, establish a comprehensive and regional developmental education plan, and train staff on integrated remediation courses. However, due to shifting changes to the direction of program offerings (i.e., the majority of the programs of study are non-credit and do not require remedial education), the project team decided to refer participants who are in need of remedial education to the ABE program at M State on an as-needed basis.

Implementation Quality

Participant Perspective. To assess the *quality* of implementation of the CU Succeed project, evaluators identified 17 indicators from the Participant Survey and seven indicators from the Partner Survey. Table 12 shows the results of implementation quality across each project strategy from the participant perspective by cohort. Cohort was defined by the grant year in which the participants were enrolled in their first program of study. The index scores have been calculated based on the percentage of Participant Survey respondents who endorsed the items (see Chapter 5 for methods to calculate the index scores).
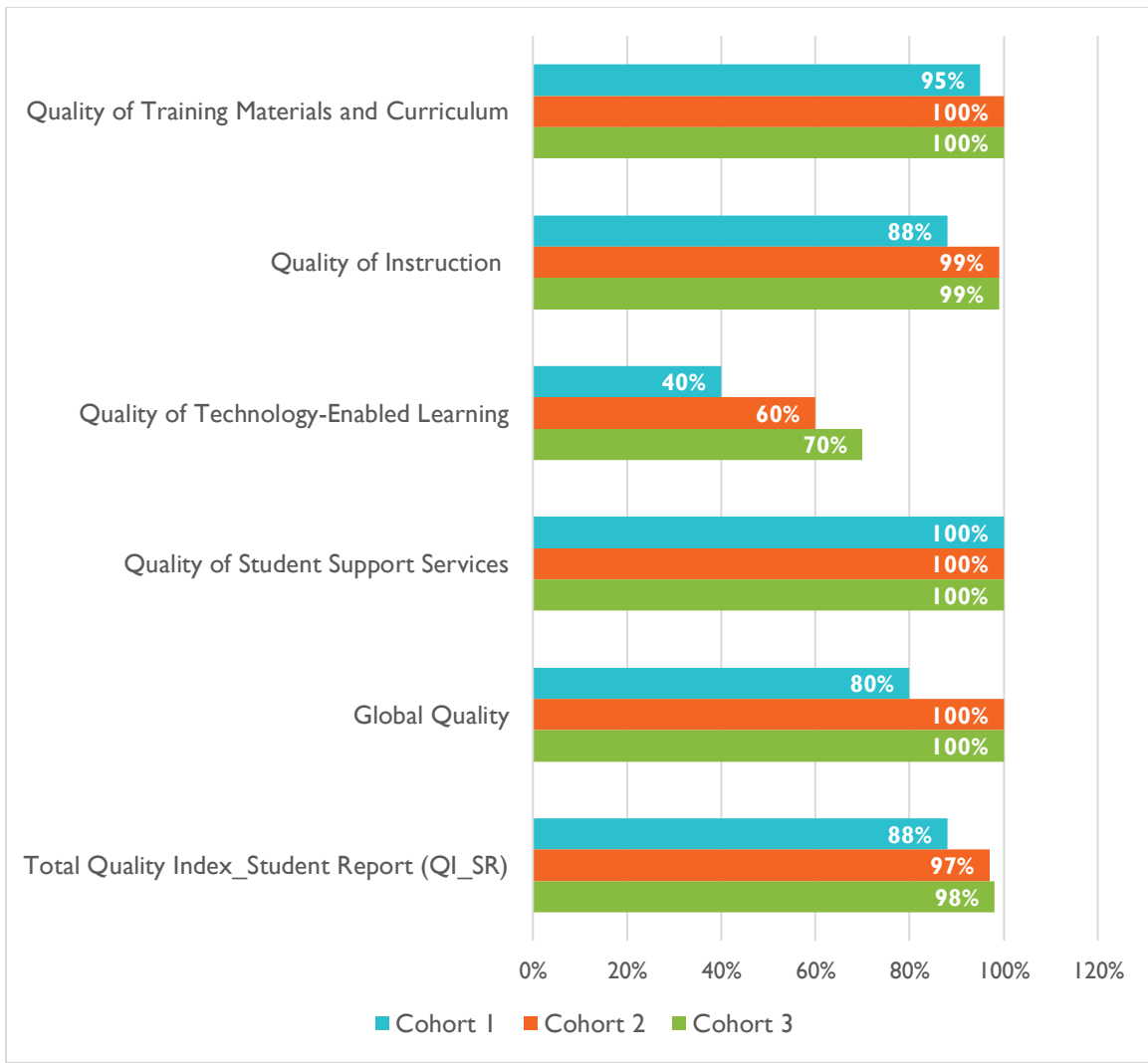
Table 12. Quality Index Score by Project Strategies Over Time

Quality Indicators	Cohort 1	Cohort 2	Cohort 3
Quality of Training Materials and Curriculum	**38**	**40**	**40**
1. The course content was relevant to the subject matter or my job.	9	10	10
2. The course content and learning materials enhanced my learning experience and knowledge of the subject matter.	10	10	10
3. The exercises and activities enhanced my learning experience and understanding of the subject matter.	10	10	10
4. The course content and learning materials were of high quality.	9	10	10
Quality of Instruction	**79**	**89**	**89**
1. The instructor(s) explained the purpose and goals of the training.	10	10	10
2. The instructor(s) was(were) knowledgeable about the topic(s) presented.	10	10	10
3. The instructor(s) responded effectively to questions.	9	10	10
4. The instructor(s) respected different viewpoints.	7	10	10
5. The instructor(s) used relevant examples to enhance my learning.	10	10	10
6. The instructor(s) provided opportunities for active participation.	10	10	10

Quality Indicators	Cohort 1	Cohort 2	Cohort 3
7. The instructor(s) presented information in an organized manner.	8	10	10
8. The instructor(s) managed class time effectively.	7	10	10
9. The instructor(s) was(were) willing to help me outside of the classroom.	8	9	9
Quality of Technology-Enabled Learning	**4**	**6**	**7**
1. Providing online and mobile instructional models to support student learning is one of the key components of the grant. To what extent did your experiences with the mobile training units enhance your learning experience?	4	6	7
Quality of Student Support Services	**20**	**20**	**20**
1. How would you rate the quality of the support services you have received related to academic support (e.g., tutoring; adult basic education to improve skills in reading, writing, and/or math; and study skills, time management, and learning styles workshops).	10	10	10
2. How would you rate the quality of the support services you have received related to career services (e.g., career exploration; job search preparation; workshops on resumes, cover letters, and interviewing skills; and career coaching).	10	10	10
Global Quality	**8**	**10**	**10**
1. Overall, how would you rate the quality of your training program?	8	10	10
Total Quality Index_Student Report (QI_SR) Score	**149**	**165**	**166**

Note. Cohort was defined by the grant year in which the participants were enrolled in their first program of study.

After converting the quality index scores into percentiles, results are shown in Figure 6. Overall, CU Succeed project activities were implemented with high quality across all areas with one exception. That is, the lower ratings pertaining to quality of technology-enabled learning may be partially attributable to the fact that the CU Succeed project experienced initial delays in procuring mobile training units (i.e., trailers), posing a significant initial obstacle to the implementation of this project component. Regardless, as the project progressed, participants' perception regarding the quality of technology-enabled learning increased.

Quality of Training Materials and Curriculum
- 95%
- 100%
- 100%

Quality of Instruction
- 88%
- 99%
- 99%

Quality of Technology-Enabled Learning
- 40%
- 60%
- 70%

Quality of Student Support Services
- 100%
- 100%
- 100%

Global Quality
- 80%
- 100%
- 100%

Total Quality Index_Student Report (QI_SR)
- 88%
- 97%
- 98%

■ Cohort 1 ■ Cohort 2 ■ Cohort 3

Note. The total score of each strategy was divided by the highest possible score. Cohort was defined by the grant year in which the participants were enrolled in their first program of study.

Figure 6. Participant Perspective of Implementation Quality: Percentile of Reaching the Highest Quality Index Score

Project participants also shared their perception of program quality during the 2017 interview. Findings of the participant interview were consistent with the findings of the quality assessment based on the Participant Survey data. Overall, these experiences and perspectives were overwhelmingly positive. Interviewees reported that they perceive CU Succeed programs to be of high quality and relevance for professionals in the construction and utilities industry, expressing the belief their participation in CU Succeed programs has increased their professional knowledge and skills. Specifically, interview participants reported that

- CU Succeed programs provide high-quality trainings, characterizing instructors as "great," "supportive," and "fantastic," while describing training materials and course content as "really neat," "very helpful," and "excellent;"

- trainings provided through CU Succeed programs are custom-tailored to align with the specific needs of training participants;

- the mobile training units through which CU Succeed programs provide trainings facilitate immersive, hands-on learning experiences for participants and increase accessibility of trainings for professionals spread out across broad geographical distances;

- CU Succeed trainings provide attendees with opportunities to communicate and collaborate with other participants from a variety of professional backgrounds and fields, exposing training participants to new perspectives and ideas; and

- the positive experiences that participants have had with CU Succeed trainings has cultivated interest in attending additional training opportunities.
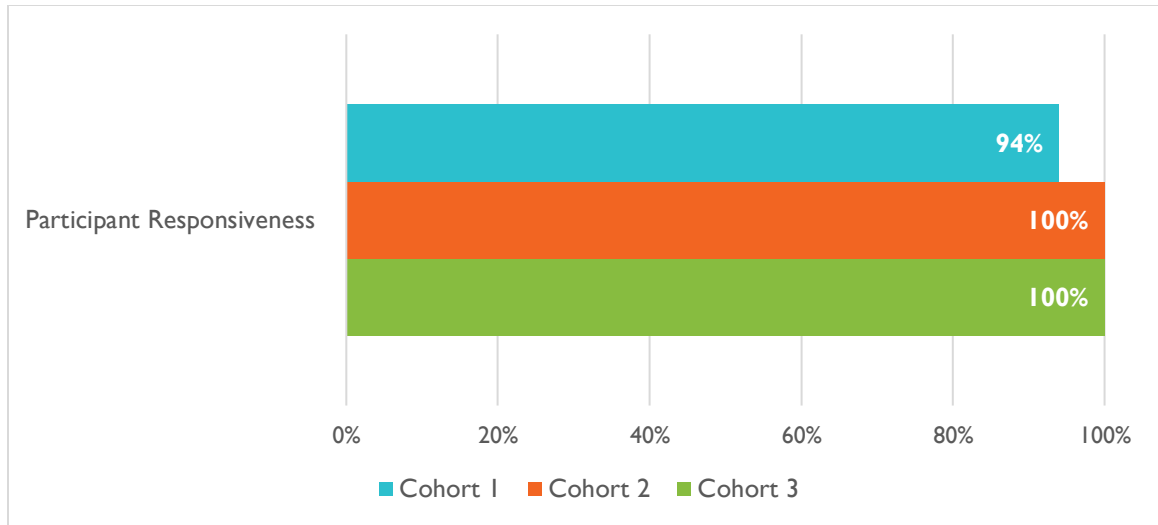
Participant Responsiveness

The last component of the fidelity assessment describes *participant responsiveness* to the CU Succeed project's implementation. Evaluators identified five indicators related to participants' satisfaction and engagement with their learning based on responses to the Participant Survey. Table 13 shows the results of participant responsiveness to implementation from the participant perspective. The index scores have been calculated based on the percentage of Student Exit Survey respondents endorsing the items (see Chapter 5 for methods to calculate the index scores).

Table 13. Participant Responsiveness to Implementation

Quality Indicators	Cohort 1	Cohort 2	Cohort 3
1. My understanding of this topic was increased.	10	10	10
2. I learned new skills to use in my course of study or on my job.	10	10	10
3. I am satisfied with the course content and learning materials.	9	10	10
4. The instructor(s) made me feel like I could do the work successfully.	9	10	10
5. Overall, I am satisfied with the instruction I received.	9	10	10
Total Participant Responsiveness Score	**47**	**50**	**50**

Note. Cohort was defined by the grant year in which the participants were enrolled in their first program of study.

After converting the quality index scores into percentiles, results are shown in Figure 7. Overall, participants were extremely responsive to programs in which they were enrolled and characterized their experiences in these programs as extremely positive. Participants reported that they believe they have obtained new knowledge and skills as a result of their participation in CU Succeed programs and communicated that they are satisfied with the content and materials of courses in which they were enrolled. Additionally, participants shared the perspective that their instructors facilitated a sense of self-efficacy among students, resulting in instruction which students also found to be satisfactory. Over time, participants' level of engagement and satisfaction remained high and stable.

Figure 7. Participant Responsiveness to Program Implementation: Percentile of Reaching the Highest Participant Responsiveness Index Score

Implementation Strengths and Weaknesses

Taken together, the implementation strengths of the CU Succeed project are summarized below.

- The project team made major modifications to the initial project work plan to ensure that the program offerings meet the urgent needs of the local construction and utilities industries. This effort ensures that the CU Succeed project provides training needed to close the skills gap in the region.

- The project was at the 97th percentile in terms of full implementation with regard to the structural aspects of the project implementation (i.e., adherence) by the end of grant Year 3. Additionally, according to project participants, the majority of the CU Succeed project components are implemented with high quality, and participants are highly engaged in their learning experiences.

Findings of the fidelity assessment also revealed some weaknesses in certain areas of implementation. Specifically,

- Due to delays in procuring mobile training units, especially for PM and CDL certification programs, participants expressed frustration and dissatisfaction with their hands-on learning experience during the first two years of the grant. Yet, participants' dissatisfaction was quickly dissolved during grant Year 3 when the mobile training units were fully installed and operated as intended.

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3. To what extent is the program sustainable and transferable?

Results of the PSAT were analyzed and used to inform the sustainability of the CU Succeed program. PAST assesses eight domains that are critical to program sustainability, including

1. environmental support (i.e., the program has leadership support from within the larger organization);
2. funding stability (i.e., the program exists in a supportive economic climate);
3. communications (i.e., the program is marketed in a way that generates interest);
4. strategic planning (i.e., the program plans for future resource needs);
5. partnerships (i.e., diverse community organizations are invested in the success of the program);
6. program adaption (i.e., the program adapts strategies as needed);
7. program evaluation (i.e., evaluation results inform program planning and implementation); and
8. organizational capacity (i.e., the program is well integrated into the operations of the organization).

Figure 8 shows the results of PSAT over time. Findings suggest that the CU Succeed program's overall capacity for sustainability was strong, and the ratings for all domains were increased except the domain of Communications. By the end of grant Year 4, the program's Organizational Capacity and Program Adaption received the highest ratings among all domains.

Figure 8. Sustainability Assessment: PSAT Results Over Time
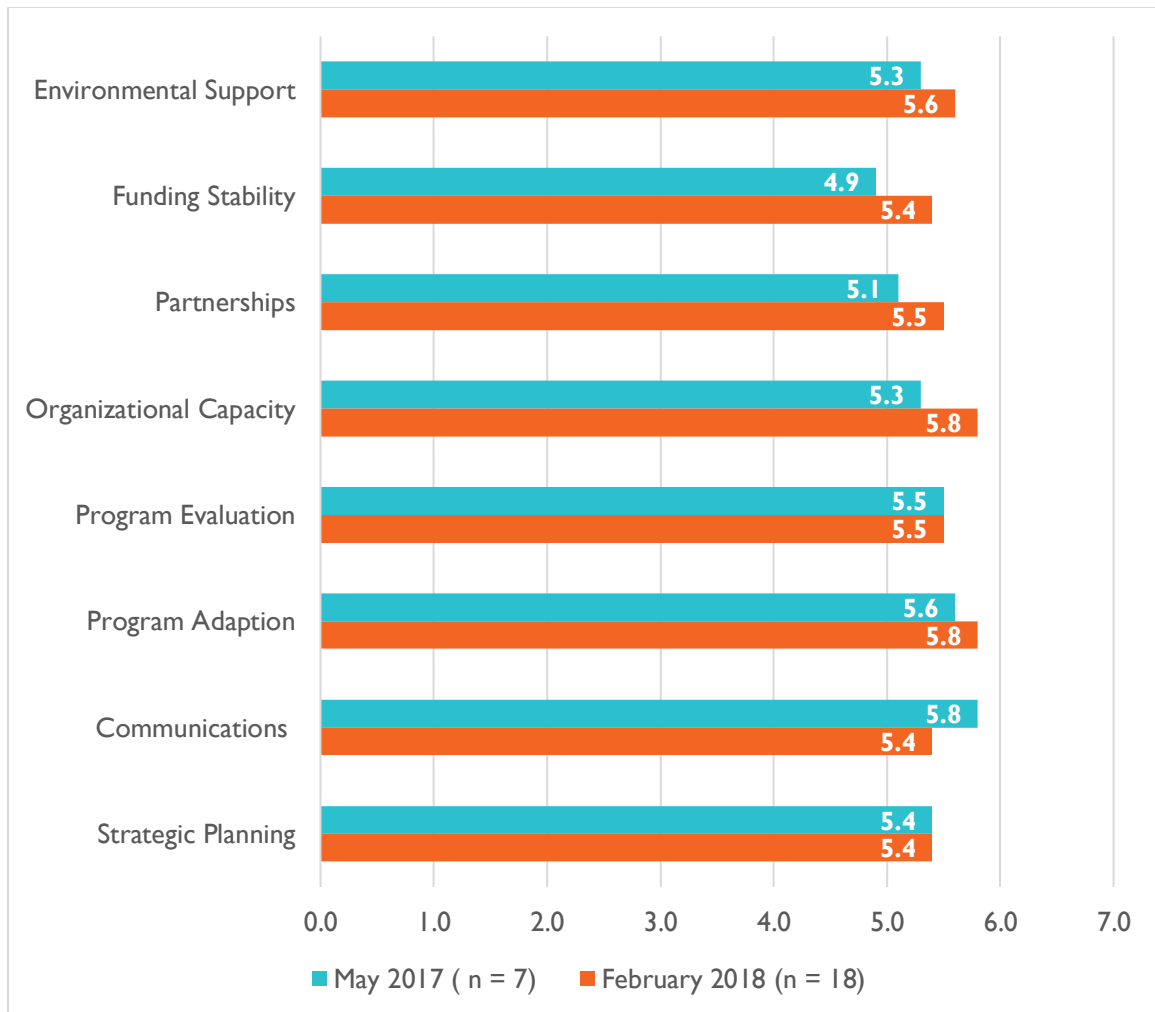
Note. PSAT items are measured on a 7-point scale from 1 (program has this to no extent) to 7 (program has this to the full extent).

Additionally, one of the key indicators of program sustainability is to have partner support. According to the findings from PSAT (see Figure XX), the ratings among the Partnerships increased from 5.1 to 5.5 from Year 3 to Year 4. Findings from the partner survey further confirmed this observation. When asked partners the extent to which the partnership between their organization and the CU Succeed program will continue and expand beyond the life of the grant, the percentage of partners *agreed* or *strongly agreed* with this statement increased from 67% to 80% from 2016 (grant Year 2) to 2018 (grant Year 4).

Finally, during the 2017 interview, project staff were asked to discuss the extent to which the grant has increased M State's capacity (i.e., human, organizational, structural, and material capacity) to sustain the CU Succeed project beyond the life of the grant. Staff shared that the CU Succeed program components were initially designed with sustainability as a central component. Specifically, interviewees indicated that this sustainability will be facilitated by project partners' ongoing participation in the grant, explaining that the fees required to enroll their employees in customized

trainings will provide the necessary financial support to sustain program offerings. Further, interview participants reported that the grant has resulted in CU Succeed staff developing valuable skillsets in program administration and has increased the efficiency of relevant organizational processes across M State campuses (e.g., partner outreach, recruitment and enrollment), which will also contribute to the continuation of grant services.

In terms of transferability, during the 2017 staff interview, in general, project staff did not indicate that any plans are currently in place to support the transferability of the CU Succeed project, though multiple interview participants nevertheless shared the belief that similar projects could be efficiently implemented at other institutions offering similar training programs in construction and utilities provided at M State.

DOL's SGA Questions

This section specifically addresses the questions posed by the DOL in the SGA for the Round 4 TAACCCT grants.

SGA.Q1. How was the particular curriculum selected, used, or created?

The CU Succeed project team collaborated and communicated with industry partners to identify the skills that the partners need for their employees. Based on the feedback, project staff and instructors modified the existing curricula, developed new curricula, and identified existing curricula within the industry that provide training needed for participants to earn industry recognized credentials. The selection and development of the curricula were centered around the types of programs that can utilize the mobile training units (i.e., Safety, PM, and CDL trailers) purchased by the grant. For the credit-based programs, the credits earned for the industry-recognized credentials can also be applied to diploma or degree programs as depicted in Figure 5.

SGA.Q2. How were the programs and program design improved or expanded using grant funds?

The CU Succeed project was designed to address seven core elements that support the project's goals and objectives, including (1) providing career pathways using existing and new portable, stackable and latticed industry-recognized credentials; (2) enhancing student career and wrap-around supportive services; (3) developing online and technology-enabled hands-on mobile training opportunities; (4) enhancing integration and contextualization of remedial education and soft skills training; (5) enhancing and expanding outreach and recruitment of TAA-eligible and similar adults; (6) incorporating transferability and articulation into career pathways; and (7) ensuring timely data collection, reporting, and analysis. The project's implementation progress of each core element is addressed in implementation question 1.

SGA.Q3. What delivery methods were offered?

As presented in Table 8, all programs of study were delivered in a face-to-face mode with one exception. That is, the Plus program is delivered online and participants can complete the training in three hours in one day.

SGA.Q4. What was the program's administrative structure?

The CU Succeed project operated under the direction of a Project Director to whom the Project Coordinator directly reports, while all other project personnel, including the Project's Assistant Coordinator,[11] business liaisons, and faculty, report to the Project Coordinator. Because the TAACCCT grant, through which the CU Succeed project is being funded, intertwines with M State's custom training services, the Dean of Custom Training also plays a key role in the development and implementation of the CU Succeed project.

SGA.Q5. What support services and other services were offered?
SGA.Q6. Was career guidance provided and if so, through what methods?

The CU Succeed project did not directly provide support services to participants. Instead, participants who are in need of support services are referred to the Spartan Center at M State (http://www.minnesota.edu/spartan-center/). The Spartan Center offers comprehensive wrap-around services to all students enrolled at M State at all campuses (i.e., Detroit Lakes, Fergus Falls, Moorhead, and Wadena). Two types of services are provided. First, academic support is provided through tutoring services. Specifically, workshops coving topics related to time management, study skills, and financial planning are offered regularly throughout the academic year. Second, services related to career research and placement assistance are also provided, including online career coach and My GPS LifePlan; workshops on resumes, cover letters and interviewing skills; and Career Exploration workshops.

SGA.Q7. Did the grantees conduct an in-depth assessment of participants' abilities, skills, and interests to select participants into the grant program? What assessment tools and processes were used? Who conducted the assessment? How were the assessment results used? Were the assessment results useful in determining the appropriate program and course sequence for participants? Was career guidance provided and if so, through what methods?

The CU Succeed project did not conduct any assessment of students' abilities, skills, and/or interests to select grant program participants. Instead, project staff indicated that any such

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[11] In grant Year 2, a curriculum designer was hired to coordinate the efforts in the area of curriculum selection and development. However, the curriculum designer resigned from the project few months after the hiring. An Assistant Project Coordinator was hired to replace the curriculum designer position; the Assistant Project Coordinator also assists with other aspects of the grant to alleviate some responsibilities from the Project Coordinator.

assessments would be administered by M State. "The college would handle that through their student support and career services centers," explained a project staff,

> *They use an ACCUPLACER assessment to gauge students' academic abilities when they enroll to see if they're ready for college-level work or if they need some additional assistance. Then, Title III offers a bridge opportunity for students who don't want to take developmental coursework but want to try to test out of it – students who just need a quick refresher with some content.*

Other project staff shared similar information, such as one who commented,

> *This grant is very focused on technical training. Students who come to us have typically sought us out and know exactly what they're getting into, so there's really not a need for any intake assessments as far as what students know about construction and utilities.*

Project staff also indicated that a number of different skill assessments were utilized by the workforce center partners. While project staff expressed that the intake assessments were beneficial to the kinds of work being done by the workforce centers and M State, several communicated the perception that these assessments did not particularly apply to the CU Succeed project.

SGA.Q8. What contributions did each of the partners make in terms of (1) program design, (2) curriculum development, (3) participant recruitment, (4) training placement, (5) job placement, (6) program management, (7) leveraging of resources, and (8) sustainability planning?

Throughout the grant period, the CU Succeed project team collaborated with a total of 66 partners and actively engaged them in project implementation. Of those, 50 (76%) partnerships were established after the grant was funded. Project staff kept a record of their interactions and communications with each partner and documented each partner's role(s) in supporting grant implementation. As shown in Table 14, the majority of the partners were engaged in sustainability planning (90%), participant recruitment (64%), and student financial assistance (54%). Slightly less than half of the partners were involved in the Advisory Board (48%), curriculum development and redesign (48%), and awareness and outreach (44%). Few partners provided support in job placement services (8%) and leveraging of resources (8%).

Table 14. Summary of Partner Roles in Supporting Grant Implementation: Project Record

Partner Role	n	%
Sustainability planning and support	45	90.0%
Participant Recruitment	32	64.0%
Student financial assistance	27	54.0%
Advisory Board	24	48.0%
Curriculum development and redesign	24	48.0%
Awareness and outreach	22	44.0%

Job placement services	4	8.0%
Leverage Resource	4	8.0%

Through the Partner Survey, partners were asked about their level of involvement in various project activities. As shown in Figure 9, partners' overall level of participation and involvement in project implementation increased slightly from Year 2 to Year 4 (0.10). When looking at individual components, partners' level of involvement increased in some areas (i.e., program design, training placement, sustainability planning), but decreased in other areas (i.e., participant recruitment, program management, leveraging of resources). Partners' level of engagement remained unchanged with regard to their involvement in curriculum development and job placement.
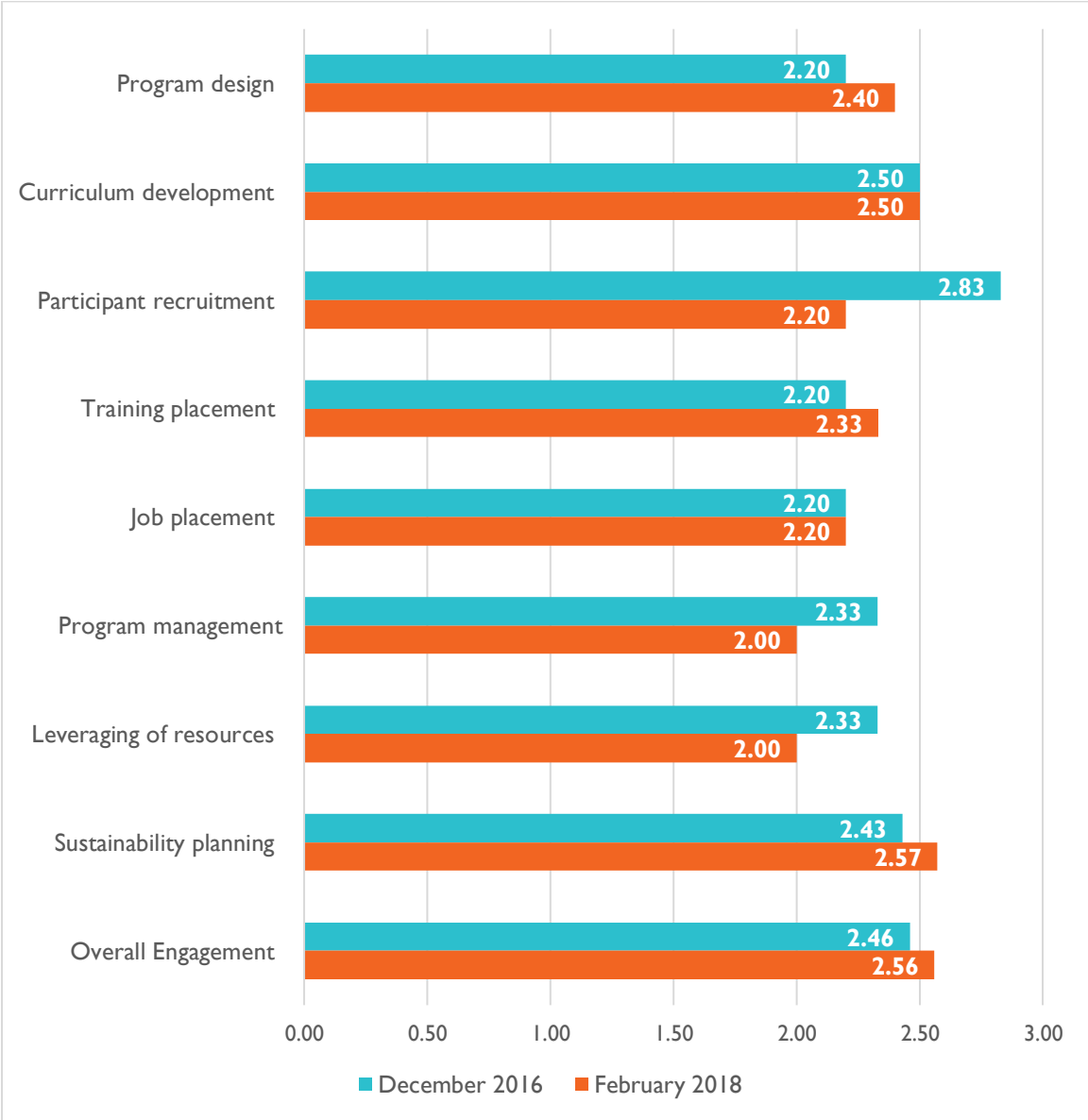

Figure 9. Level of Partner Engagement in Project Implementation Over Time

When asked how satisfied they are with their current level of involvement in the CU Succeed project, as shown in Figure 10, there were 2-percentage points increase when partners were asked how satisfied they were with their current level of involvement. Additionally, there was There were11-percentage points increase when partners were asked how satisfied they were with the CU Succeed project staff's efforts to engage them in the program from grant Year 2 to grant Year 4.
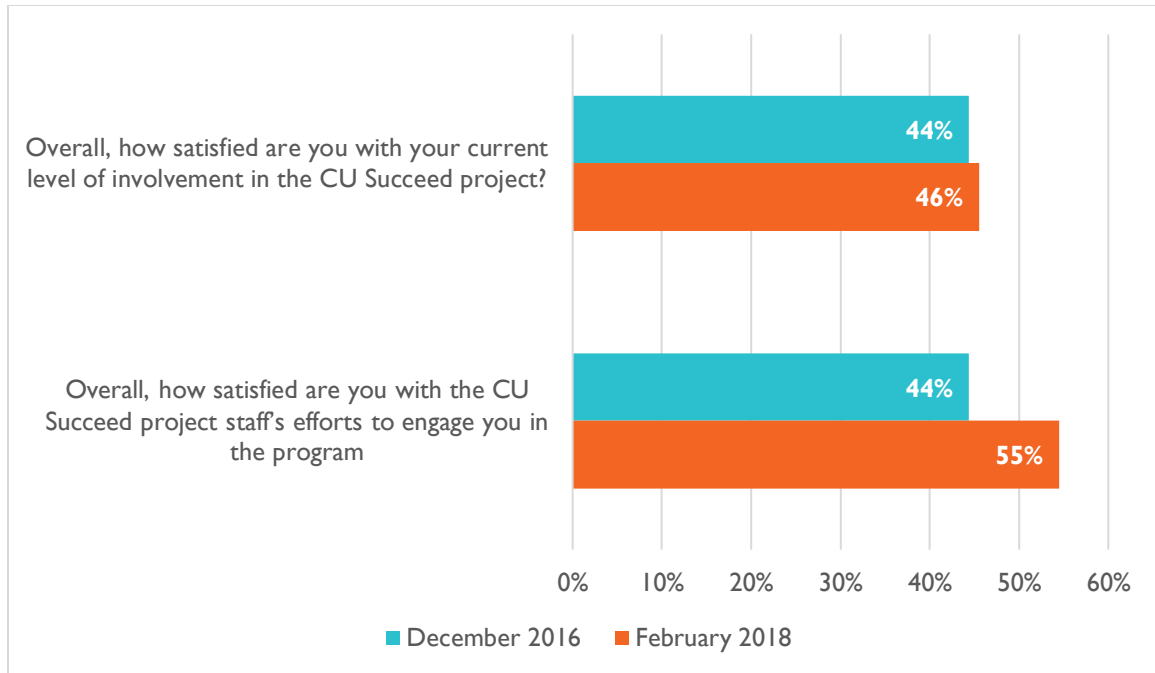

Figure 10. Partner Satisfaction Regarding Level of Engagement: Percentage *Satisfied* or *Very Satisfied*

During the 2017 staff and partner interview, interviewees were asked to elaborate on how partners were engaged to support grant objectives, including (1) program design, (2) curriculum development, (3) participant recruitment, (4) training placement, (5) job placement, (6) program management, (7) leveraging of resources, and (8) sustainability planning. Findings from project and partner interviews are summarized below.

Partnership Support in Program Design. Project staff reported that partners have been highly involved in supporting program development and design from the onset of the CU Succeed project. Specifically, interview participants explained that partners provided valuable perspective regarding current trends and needs in industry, as well as perspective regarding the types of training and other preparation necessary for workers to be successful in their career ladder. "Program design was really the first thing we did, our initial focus, and partners were invited to participate in that process early," commented an interview participant. "This entire program was designed based on industry feedback." Another interviewee elaborated, "I believe we spent somewhere between six and eight months just soliciting feedback from partners in terms of what shape they wanted this project to take… they were very responsive." Several members of the project staff expressed that without the early assistance that partners provided in informing program design, the CU Succeed

project would have been unable to achieve the level of success that it has. "You can't have customized training without customization," indicated one such interview participant. "We don't know what voids to fill or needs to address without industry perspective."

Similarly, project partners reported that, during the program development phase, they had ample opportunities to provide staff with guidance on the design of the CU Succeed project and its related programs. As the project progressed, partners continued being offered opportunities to provide general feedback about the programs being developed. "We get plenty of opportunities to talk to [project staff] about additional things we think they should include in their programs based on what [we] need [in industry]," commented one project partner. Partners reported that this manner of feedback is typically geared toward the customized trainings that the CU Succeed project offers to incumbent workers. "We tell them what we need and what kind of training needs we have [for our employees], as well as skills we think people who are just entering our industry will need," said one such partner. Partners also shared a sense of appreciation for the degree to which CU Succeed project staff incorporated their input into program development and revisions, describing it as "encouraging" to see their guidance and recommendations utilized across grant-affiliated programs. "I am always impressed by [project staff's] willingness to listen," shared a project partner. Another commented, "It's clear that [project staff] have [partners'] best interests at heart from how much they use our [feedback]. They asked me what I needed and gave me it."

Partnership Support in Curriculum Development. Project staff shared that project partners have been highly engaged in supporting curriculum development since the beginning of the CU Succeed project. Overall, project staff characterized partners' efforts to support curriculum development as central to the continued success of the CU Succeed project, allowing project staff to better facilitate employee and employer access to up-to-date and in-demand industry knowledge and skills. Interviewees indicated that partners support this goal through serving on advisory committees, providing guidance regarding the development of overall programs of study and collaborating with CU Succeed Industry Liaisons to create customized trainings for incumbent workers. One interviewee shared,

> *The Industry Liaisons have worked closely with our business partners to try to gauge what kind of training and credentials they're looking for their employees to obtain. Basically, business partners are involved from the start in helping us identify what they want their employees to be custom trained in, then they come back and work with us on a curriculum.*

Project staff expressed the perspective that working with partners to develop curricula as well as receiving partner feedback regarding extant curricula has been an "eye-opening" and "enlightening" experience. "[Curriculum development], in my mind, is something we didn't fully comprehend until we had gotten the grant, just in terms of everything that goes into that process," commented one such member of the project staff. "And now, I think it has been one of our biggest successes, and help from our partners [has contributed] to that."

In a similar vein, project partners indicated that they are regularly invited to play a role in the curriculum development process. Numerous partners reported having served on advisory

committees responsible for providing general feedback on curriculum. "Most of my involvement with curriculum [development] has been through the advisory committees," said one such partner. "I let [project staff] know whether what they're covering [in the curriculum] is what we need in the industry. If it isn't, we go back to the drawing board." Partners also indicated that advisory committee meetings have been ongoing throughout the grant, though one indicated that these meetings have been less frequent as the grant progresses. One partner's comment summarizes partners' general perception about CU Succeed project staff's effort to involve them in curriculum development, "I definitely think that M State does a good job of involving industry [in curriculum development] and asking for industry's support and approval."

Partners also described opportunities they have received to support curriculum development for trainings in which their employees participate. When working with CU Succeed staff to enroll current employees in professional development and training sessions, partners shared that their input is seriously considered and incorporated into the training. Partners described numerous scenarios in which they sought specific training for their employees and were supported by project staff, reporting that staff structured these trainings based upon partner needs. "I remember giving [project staff] an outline of what my [employees] needed based upon [issues] we have had," explained one such project partner, sharing an instance in which CU Succeed staff adhered to an extremely specific training request,

> *We were having problems with scaffolding, so I wanted [project staff] to come [to my business] and set up a couple of different scaffolds so [my employees] could see what new items were coming out, how to put different ladders up, how to place the ladders in different ways to safely get up onto those scaffolds. I also wanted [project staff] to teach the standards for mobile scaffolding, pump jack scaffolding, and cover tubes and couplers because those are the [scaffolds] that [my employees] use. I wanted [project staff] to focus on what kind of fall protection [my employees] need for those scaffolds and what kind of ladders they need for the scaffolds. I wanted [project staff] to focus on the two-foot rule, the four-foot rule, and the five-foot rule, as well — to explain why [my employees] need to use them and how important they are when determining the placement for a trench. Is it by a road? Is it by a pedestrian? All of that. Why it's important to check the soil, the different ways that you can check the soil to make sure that you're creating the trench correctly. [Project staff] covered all of [my requests].*

Partnership Support in Participant Recruitment. Project staff reported that partners have been highly involved in supporting participant recruitment, particularly the recruitment of incumbent workers seeking opportunities for professional development and training to advance their current careers. Interview participants also indicated that workforce center partners have been instrumental in this regard — facilitating communication between CU Succeed staff and potential program participants that may have otherwise not occurred. "We have had a wonderful relationship with our industry partners, but that goes double for our workforce center partners," explained an interviewee.

[Workforce center partners] work with people every day, whether those people are displaced workers or kids just out of high school. They are the ones who refer [potential participants] to us for training. Sometimes, their clients aren't just individuals, either. [Workforce center partners] work with the community, and they work one-on-one with companies who are looking to train their employees. [Workforce center partners] have leveraged those relationships and have let the professional community know how we have supported their success and [can continue] to do so.

Consistently with the findings from staff interview, project partners reported having supported recruitment through continuing to enroll their employees in CU Succeed training programs, explaining that doing so was advantageous to the project in achieving its recruitment goals as well as to partners in training their workers. "I think all of us [partners] are involved in recruitment, at least as far as just getting our people in the classroom," commented one project partner. Others expressed similar sentiments, such as a partner who reported, "I don't do much [recruitment] for [traditional] students. I normally work with [project staff] to [recruit] people already in the industry." Another partner shared,

There are different levels. There are people looking to get jobs and get into the industry, and then there are people already in the industry. I support and use the training options that this grant created for additional and recurring training for people already in the industry.

Several partners also shared that they have supported the CU Succeed project through recruiting additional organizations to partner with M State. One such partner reported, "I usually visit with the factory maintenance superintendents and ask them what their needs are, then I tell [them] about the opportunities that are available [at M State]." Another partner indicated that they support the CU Succeed project's recruitment efforts through organizing professional networking events, creating opportunities for project staff and extant partners to connect with currently unaffiliated organizations. "We have a luncheon every month and a social event once a year," this partner explained.

There's also an annual conference which is where [the project] gets the most attention. We give M State the opportunity to show their trailers and their programs. There's news media coverage there to help them get the word out, too. I know for a fact that last year that we actually had a number of people who attended after seeing the news coverage from the year before and wanted to know more about [CU Succeed].

Partnership Support in Training Placement. Project staff had few comments to share regarding the extent to which partners have supported training placement for the program participants. For the most part, staff indicated that participants enrolling in M State's training programs have already made conscious decisions as to the specific types of training they want to receive, noting that little to no additional assistance has been necessary in helping students determine in which programs they should enroll.

Industry partners communicated that any supports being offered to ensure proper training placement for CU Succeed participants have stemmed from the nature of the work that their

employees complete. "We look out our [employees] and decide what training is relevant, then see if M State has [a program covering it]," commented one such partner. Though no workforce center partners were available to participate in interviews, industry partners and project staff indicated that they have played a central role in connecting new program participants with appropriate training placement aligning with their skills and interests when appropriate. For the most part, interview participants shared that this has particularly been true for dislocated workers (i.e., TAA-eligible workers and similar adults) and individuals interested in exploring new career paths.

Partnership Support in Job Placement. Project staff reported that, for the most part, participants enrolling in CU Succeed training programs are already employed by partner organizations. However, in situations where program participants are not already employed, project staff reported that the partners make appropriate efforts to facilitate relationships that can foster future employment opportunities. Examples of partnership support for job placement include partner visits to campus and student visits to partner worksites, informational sessions and lectures (e.g., Q and A's), and professional referrals. "For our students who are looking for work and aren't already employed, mostly our partners just let them know what jobs are out there," explained an interview participant. "Mostly, though, everyone we have here is already working or already has a job lined up, so [job placement] is not exactly relevant."

Partners reported similar information to project staff regarding the extent to which they have support the CU Succeed project's job placement activities — specifically that, for the most part, participants in CU Succeed programs do not require job placement services as they are already members of the incumbent workforce. "For the most part it was just our seasoned employees who [my company] got [them] involved in [CU Succeed]," indicated one such partner. Another reported,

The people that I help recruit into the trainings or interact with have all already gotten a [professional] position, and [their participation in the CU Succeed project] is just enhancing their skills in their position. I'm focused on helping incumbent employees advance their current careers rather than helping people launch entirely new careers.

Partners who did assist with job placement activities reported that they tend to do so through keeping project staff and participants apprised of current professional opportunities in their organizations, as well as offer perspective employees regarding possible career paths and skills necessary to navigate those career paths. "I've helped out with students who needed to practice interviewing and other soft skills," commented one project partner. "If I can, I tell them about job openings I know about, too."

Partnership Support in Program Management. Project staff reported that program management has fallen largely, if not entirely, upon CU Succeed project staff, though they reiterated the substantial contributions offered by partners regarding program design and curriculum development. In general, project staff expressed the perspective that partner feedback plays a critical role in the effective stewardship of the CU Succeed project, but indicated that this stewardship is ultimately the responsibility of project staff. Interviewees indicated that, from their perspective, partners appear to be satisfied with this level of involvement in program management

and have not expressed frustration with current systems and processes, nor do they want to become more immersed in program management activities.

Partners did not share substantial information concerning their involvement in supporting the management of the CU Succeed project other than offering general feedback and guidance when solicited. For the most part, partners indicated that they were uninterested in serving management roles and ultimately preferred to entrust the stewardship of CU Succeed to project staff. However, multiple partners also indicated that they would be willing to fulfill any responsibilities that the project requires of them in order to support its success. "I've never been asked [to fill a management role], and I would rather not — but if [project staff] asked me to, I would," said one project partner. "I would be more than happy to help them because I firmly believe in what they're doing. I find their program exceptional."

Partnership Support in Leveraging of Resources. CU Succeed staff reported that project partners were instrumental in navigating early obstacles to acquire a functional and appropriately sized trailer for the CDL mobile training module. "We've had some business partners step up and go over and above to help us out, especially with some of our early CDL training," commented one interviewee. "We don't have facilities at our college large enough to operate a tractor trailer. So we had an industry partner that let us use their land, their area, their lot, their shop and doc for almost four months at no charge."

Project staff also reported that other partners have made significant contributions, such as mechanical equipment for the students to use during their training and physical space in which trainings can occur. Interview participants said that these contributions provide invaluable supports to the CU Succeed project by connecting program participants with opportunities for hands-on learning in current industry environments. In addition, project staff also emphasized that employers' support for their workers' enrollment in CU Succeed program of study constitutes significant leveraging of resources. "In my opinion, above everything else, the biggest resources being leveraged are time and money because employers are sending their people [to M State] on the clock and paying their wages while they're here," said one such interviewee. "That's pretty special as far as I'm concerned."

Consistent with project staff's report, project partners reported having leveraged numerous types of resources to support the implementation of the CU Succeed project, ranging from physical infrastructure (e.g., equipment, facilities, funding) to more general contributions (e.g., feedback, guidance, time). "We provided them with a location to do a training and equipment to support it – a projector, a screen, scaffolds… things like that," reported one project partner. "Then, of course, we pay for the training, too." Another shared, "We have given resources like equipment for shop activities… and we provide people to participate in the trainings." For the most part, partners communicated that they would be willing to leverage additional resources as necessary to support the continued success of the CU Succeed project.

Partnership Support in Sustainability Planning. Project staff reported that project partners have demonstrated a sustained commitment to the success of the CU Succeed project, indicating that this commitment has been apparent since the project's inception and that they believe it will continue following the eventual expiration of grant funds. Project staff shared that conversations with partners regarding the future of CU Succeed project components and offerings have become increasingly more frequent throughout the life of the grant, and partners have been the ones who initiated these conversations. "I think [conversations regarding program sustainability] are becoming a bit more prevalent now because of where we are in the grant, time-wise," commented a member of the project staff. "Our partners are often the ones who are asking us questions about the future. They have benefited from our trainings and want to see them continue." Project staff communicated that partners are central to the continuation of the CU Succeed project given that, ultimately, they are the entities that will fund future trainings. As such, interview participants emphasized the importance of continuing to provide partners with high-quality, customized training to retain them as both supporters and advocates of the CU Succeed program. An interviewee shared, "I don't think we will have a hard time with [sustainability]. We will continue to provide trainings long after the grant, and our partners will continue to use them."

Project partners shared that they are willing to support the sustainability of the CU Succeed project however project staff indicates is required, expressing the opinion that the trainings offered through the project are of high quality and benefit not only their organizations, but the construction and utilities industry as a whole. Partners also communicated that they believe the program will prove to be highly sustainable following the eventual expiration of grant funds, indicating that they will continue to pay the necessary fees for their employees to participate in trainings as long as those trainings continue to adhere to the high standards utilized thus far. "The CU Succeed project has a lot of strengths," said one partner. "It's mobile. It's hands-on. They're on the ball over there [at M State]. I think they have a very, very good program that will continue after the grant."

SGA.Q9. What factors contribute to partners' involvement or lack of involvement in the program? Which contributions from partners were most critical to the success of the grant program? Which contributions from partners had less of an impact?

During the interviews, both project staff and partners were asked to identify factors they believe may play a role in encouraging or discouraging partner involvement and describe partners' contributions that have been particularly critical. Findings are summarized below.

Factors Contributing to Partners' Involvement or Lack of Involvement. When asked to describe challenges that have arisen while working with CU Succeed project partners, project staff expressed that, for the most part, their experiences have been overwhelmingly positive. However, several interview participants did express the frustration with some partners who were committed to the grant during the proposal development stage but were disappointingly absent when the time came for program implementation, necessitating rapid adjustment on the part of CU Succeed staff. "Some of our initial partners were a big disappointment for us," commented an interviewee. "I don't understand it, frankly. They took the time to write letters of support and everything, but then

they suddenly indicated they no longer wanted to be involved." Another interview participant shared,

> *I have nothing but wonderful things to say about our current partners. However, our initial partners just weren't there. They vanished. So, we had to take a step back and sort of look at everything and reevaluate. We went out [into the industry] and got some new construction partners on our advisory board, and we recovered quickly from there.*

Project staff also noted that most of the disengaged partners have since been replaced by more invested partners.

Staff explained that they are still experiencing some degree of challenge in working to encourage engagement from partners working in the trucking industry, however. "The trucking industry has just been slow to come around," said an interviewee, expressing that some industry partners appear more interested in hiring new employees than in training current ones. Sharing similar sentiments, another interviewee commented,

> *They were the most excited [partners] when we started [the CU Succeed project]. We have the [CDL] trailer now, but we're not seeing them come in as much as we had anticipated, or as much as they said they would. I think that, at the beginning, they thought we were going to train all of these students that they could hire. That's one of the challenges we have to work with. We have flipped a little bit on that to make sure that they understand there are different types of classes to better their existing workforce, and we're not a training facility where we're going to pump [students] out so they can hire them. We're having as much trouble finding the students as they [have with finding qualified] drivers.*

Staff expressed confidence that these challenges will be overcome with time, explaining that additional communication to explain the focus of the CU Succeed project will alleviate confusion and/or concern from partners moving forward. "Sometimes it just comes down to making a partner understand that we need to benefit from the partnership, as well," summarized an interviewee. "Both sides have to get something out of the deal."

Overall, project staff described their experiences working with CU Succeed project partners as extremely positive, characterizing these experiences as "rewarding," "eye-opening," and "phenomenal." When asked to identify successes regarding partner involvement in supporting project activities, staff provided numerous examples, including but not limited to referring new partners and organizations to be involved in the CU Succeed project; collaborating with Industry Liaisons to identify appropriate trainings for employer partners; providing support for curriculum development; and utilizing CU Succeed programs for their employees. "Our partners are a major part of how we have become so recognized in industry and in our communities," reported an interviewee. "The referrals and the word-of-mouth we've gotten from [partners] who send employees to us [for training] have been incredible. It has been a big success." Interview participants expressed the belief that engaging partners in the program design and curriculum development process has resulted in generally high industry engagement, cultivating efficacy among

business partners regarding their ability to facilitate customized trainings specific to their employees' needs. "It's as simple as giving [partners] what they need," commented a member of the CU Succeed staff.

> *[The CU Succeed project is] flourishing now because we deliver such customized training. Then, whoever participated in that training is going to tell more people about it, and they're going to tell more people, and those people are going to tell people… it builds [momentum].*

Similarly, CU Succeed project partners were asked to describe their level of involvement in the CU Succeed project, factors contributing to their level of involvement, and the extent to which they are satisfied with their level of involvement. Partners communicated that they have remained highly involved throughout the grant, reporting that they support the project in numerous and diverse ways (for information on specific ways in which partners reported having supported the CU Succeed project, please refer to the preceding *Partnership Support* sections). In general, partners shared that they are both comfortable and satisfied with their current level of involvement, though several communicated that they would be willing to become more involved in the project if staff indicated that it was necessary.

When asked about the factors contributing to their level of involvement, project partners shared numerous reasons for becoming involved with the CU Succeed project, though the most common reason is so that they have access to high quality trainings and professional development for their employees. Partners also characterized the process of becoming involved in the CU Succeed project as "extremely convenient," explaining that it "is easy to line up, and it's remote so [staff] can bring [trainings] to us and teach it wherever we want it." When asked to describe what it is that makes the CU Succeed project's trainings so high quality, a partner reported, "I think M State does a great job at listening to the community and to industry representatives." Another shared that their decision to partner with the CU Succeed project stemmed largely from the M State's positive reputation in the community, sharing,

> *We live in a small community. I think that everyone around here knows that they can trust M State. They've worked with M State for so many years, so I think that has a lot to do with it. They know that M State offers good training. They have a good reputation and are building on that relationship. I think that's part of it, the relation. Basically, building the relationship.*

Critical Contributions from Partners. Project staff identified numerous contributions from partners, which they consider to be critical to the success of the CU Succeed project. Project staff said that partners' willingness to provide substantive feedback concerning the quality of the training programs, as well as their collaboration in designing and implementing those programs, are critical to the success of the project. Interview participants also stated that the success achieved by the CU Succeed project to date would have been unattainable without partners' input, characterizing partners' perspectives as essential in ensuring alignment between CU Succeed courses and curriculum and industry needs. "The biggest thing our partners have done for us is let us know what they are looking for," commented an interviewee,

That might sound silly, but you can brainstorm as much as you want, but unless you can talk to the people at the heart of what you are trying to do, you're really just daydreaming. You can have great ideas… but you need perspective from people in the field who can tell you whether that's [going to work or not]. [When we first started], some partners looked at some of our plans and said, "Hey, this is never going to work." [These types of feedback] helped us tremendously. Their input has grounded us and has guided us throughout this work.

Project staff also reiterated the important role that partners have played in serving as ambassadors and advocates for the CU Succeed project, indicating that many newer project partners were referred to the program by extant partners. "I can't say enough about the referrals," reported one such interviewee, "Word of mouth is the best way for us to get in contact with new businesses, and it's the best way to be sure that [CU Succeed] continues." Interview participants also communicated the importance of employers' support of their employees' enrollment in CU Succeed programs, such as one member of the project staff who commented, "In my mind, hands down, the biggest thing our partners have done for us is to allow all of [their employees] to take classes with us. If we couldn't fill the seats, we wouldn't be here."

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Appendix: Fidelity Assessment Methods

Table A1. Participants' Perspectives of Implementation Quality

Participant Short-Term Program Survey Items	Original Scale from the Survey	Reclassified Scale
Quality of Training Materials and Curriculum		
• The course content was relevant to the subject matter or my job. • The course content and learning materials enhanced my learning experience and knowledge of the subject matter. • The exercises and activities enhanced my learning experience and understanding of the subject matter. • The course content and learning materials were of high quality.	Items were measured on a five-point scale: (1) Strongly Disagree, (2) Disagree, (3) Neutral, (4) Agree, and (5) Strongly Agree.	A response of 4 and 5 was recoded as 1 (endorsed response). A response of 1, 2, and 3 was recoded as 0 (not-endorsed response).
Quality of Instruction		
• The instructor(s) explained the purpose and goals of the training. • The instructor(s) was(were) knowledgeable about the topic(s) presented. • The instructor(s) responded effectively to questions. • The instructor(s) respected different viewpoints. • The instructor(s) used relevant examples to enhance my learning. • The instructor(s) provided opportunities for active participation. • The instructor(s) presented information in an organized manner. • The instructor(s) managed class time effectively. • The instructor(s) was(were) willing to help me outside of the classroom.	Items were measured on a five-point scale: (1) Strongly Disagree, (2) Disagree, (3) Neutral, (4) Agree, and (5) Strongly Agree.	A response of 4 and 5 was recoded as 1 (endorsed response). A response of 1, 2, and 3 was recoded as 0 (not-endorsed response).
Quality of Technology-Enabled Learning (e.g., Experience with Mobile Training Unit)		
• Providing online and mobile instructional models to support student learning is one of the key components of the grant. To what extent did your experiences with the mobile training units enhance your learning experience?	The item was measured on a four-point scale: (1) Not at all, (2) A little, (3) Somewhat, and (4) Very much. Individuals who did not have experience with the mobile training units can select	A response of 4 was recoded as 1 (endorsed response). A response of 1, 2, and 3 was recoded as 0 (not-endorsed response).

Participant Short-Term Program Survey Items	Original Scale from the Survey	Reclassified Scale
	"Mobile training was not a part of my program."	A response of "Mobile training was not a part of my program" was recoded as missing.
Quality of Student Support Services		
• How would you rate the quality of the support services you have received related to academic support (e.g., tutoring; adult basic education to improve skills in reading, writing, and/or math; and study skills, time management, and learning styles workshops). • How would you rate the quality of the support services you have received related to career services (e.g., career exploration; job search preparation; workshops on resumes, cover letters, and interviewing skills; and career coaching).	Items were measured on a five-point scale: (1) Very Poor, (2) Poor, (3) Fair, (4) Good, and (5) Excellent. Because student support services are provided on an as-needed basis, students who did not receive or use any student support services can select N/A (not applicable).	A response of 4 and 5 was recoded as 1 (endorsed response). A response of 1, 2, and 3 was recoded as 0 (not-endorsed response). A response of N/A was coded as missing.
Global Quality		
• Overall, how would you rate the quality of your training program?	Items were measured on a five-point scale: (1) Very Poor, (2) Poor, (3) Fair, (4) Good, and (5) Excellent.	A response of 4 and 5 was recoded as 1 (endorsed response). A response of 1, 2, and 3 was recoded as 0 (not-endorsed response).

Table A2. Partners' Perspectives of Implementation Quality

Partner Survey Items	Original Scale from the Survey	Reclassified Scale
• Based on your experiences with the project, rate the quality of program implementation on each of the key project components. ▪ **Program design** (e.g., identify and refine program implementation strategies)? ▪ **Curriculum development** (e.g., identify credentials that meet industry needs; assist in curriculum design and redesign to ensure the training provided is aligned with industry needs; identify important knowledge and skill sets that meet industry needs) ▪ **Participant recruitment** (e.g., assist in recruiting TAA-eligible workers, veterans, unemployed, or other program participants) ▪ **Training placement** (e.g., assist in placing participants into appropriate training programs that align with their skill sets and career interests) ▪ **Job placement** (e.g., provide job searching services; provide career counseling and coaching; assist in placing participants into construction and utilities jobs after program completion or to advance participants' career in the field; connect participants with employers) ▪ **Program management** (e.g., participate in advisory board; provide suggestions or feedback to support grant implementation) ▪ **Leveraging of resources** (e.g., contribute to monetary, equipment, or time donation) ▪ **Sustainability planning** (e.g., facilitate employer engagement; be involved in conversations, meetings, or other activities related to support project sustainability)	Items were measured on a five-point scale: (1) Very Poor, (2) Poor, (3) Fair, (4) Good, and (5) Excellent. Because not all partners were involved in all aspects of project implementation, participants can select "not applicable (N/A)" if they were not involved in certain components.	A response of 4 and 5 was recoded as 1 (endorsed response). A response of 1, 2, and 3 was recoded as 0 (not-endorsed response). A response of N/A was coded as missing.

Table A3. Participant Responsiveness Items

Participant Short-Term Program Survey Items	Original Scale from the Survey	Reclassified Survey
• My understanding of this topic was increased. • I learned new skills to use in my course of study or on my job. • I am satisfied with the course content and learning materials. • The instructor(s) made me feel like I could do the work successfully. • Overall, I am satisfied with the instruction I received.	Items were measured on a five-point scale: (1) Strongly Disagree, (2) Disagree, (3) Neutral, (4) Agree, and (5) Strongly Agree.	A response of 4 and 5 was recoded as 1 (endorsed response). A response of 1, 2, and 3 was recoded as 0 (not-endorsed response).