



## Third-Party Interim Evaluation of MoStemWINS

Grant # TC-26470-14-60-A-29

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**EVALUATION REPORT** This interim evaluation report describes the mid-point implementation of Missouri's Round 4 Trade Adjustment Assistance Community College and Career Training (TAACCT) grant. MoSTEMWINS is comprised of Missouri's 12 community colleges and one statewide technical college.



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## Acronyms

Abbreviation	Definition
AAS	Associates in Applied Science
ALA	Adult Learning Academy
AWS	American Welding Society
C&A	Cosgrove & Associates
C4PL, CPL	Credit for Prior Learning
CAO	Chief Academic Officer
CBE	Competency-based Education
CBO	Community-based Organization
CC	Crowder College
CCENT	Cisco Certified Entry Level Network Technician
CPT	Certified Production Technician
CSIS	Computer Science Information Systems
CTE	Career and Technical Education
DHE	Department of Higher Education for the State of Missouri
DOE	U.S Department of Education
DOL	United States Department of Labor
ECC	East Central College
EPR	Evaluation Progress Report
ETC	Electronic Technician Certification
ETO	Efforts to Outcomes by Social Solutions
FIRST	Fundamentals Industry Readiness Skills Training
HLC	Higher Learning Commission
HPTRL	Health Professions Tutoring and Resource Lab
IT	Information Technology
JC	Jefferson College
LMI	Labor Market Information
MA	Medical Assistant
MAC	Mineral Area College
MACC	Moberly Area Community College
MCC	Metropolitan Community College
MCCA	Missouri Community College Association
MHW	Missouri Health Workforce Innovations Network
MMW	Missouri Manufacturing Workforce Innovations Network
MoHealthWINs	Missouri Health Workforce Innovations Network
MoManufacturingWINs	Missouri Manufacturing Workforce Innovations Network
MOOC	Massive Open Online Course
MoSTEMWINs	Missouri STEM Workforce Innovations Network
MoWINs	Missouri Workforce Innovations Network

MRTDL	Missouri River Transportation, Distribution, and Logistics
MSSC	Manufacturing Skill Standards Council
MSW	Missouri STEM Workforce Innovations Network
NCMC	North Central Missouri College
NCRC	National Career Readiness Certificate
OJT	On the job training
OSHA	Occupational Safety and Health Administration
OTC	Ozarks Technical Community College
PREP	Personal Resource and Education Plan
R&D	Research and Development
ROI	Return on Investment
SCC	St. Charles Community College
SFCC	State Fair Community College
SI	Supplemental Instruction
SNAP	Supplemental Nutrition Assistance Program
STARFISH	Starfish Retention Solutions
STCM	State Technical College of Missouri
STEM	science, technology, engineering and math
STLCC	St. Louis Community College
TAACCCT	Trade Adjustment Assistance Community College and Career Training
TRCC	Three Rivers Community College
USDA	United States Department of Agriculture
WIB	Workforce Investment Board
WIOA	Workforce Investment Opportunity Act

## Executive Summary

This interim evaluation report describes the mid-point implementation of Missouri's Round 4 Trade Adjustment Assistance Community College and Career Training (TAACCCT) statewide grant. The Missouri STEM Workforce Innovations Network (MoSTEMWINs) consortium is comprised of the 12 community colleges (two urban and 10 rural) and one statewide technical college. MoSTEMWINs was formed to provide opportunities for Missouri's Trade Adjustment Assistance (TAA) eligible, long-term unemployed and other dislocated workers to obtain strong science, technology, engineering and math (STEM) skills tied to occupations in the state's targeted and growth economic clusters.

The report directs specific attention to program and strategy implementation, employer and stakeholder engagement, and grant progress related to performance outcomes as of the grant's mid-point. Specific evaluation questions addressed in this report include the following.

- Are colleges partnering with employers and other grant partners to develop and/or redesign programs of study?
- Are colleges implementing programs and strategies as designed and with fidelity?
- Are colleges making appropriate progress toward grant performance targets?
- What are colleges learning during program and strategy implementation?
- What innovations/strategies appear to hold promise for future scaling and sustainability?

Analysis of available data reveals the MoSTEMWINs consortium and its member colleges have engagement with employers and community based organizations to develop and redesign programs of study. Program development and redesigned efforts are connected to industry identified and recognized program structures, competencies and credentials/awards. Furthermore, consortium member colleges are implementing programs of study and grant strategies with fidelity.

Grant enrollment and program completion data reveal the consortium is on schedule to meet expected grant performance targets for these areas. The consortium enrollment of 1,550 is 84% of the grant target and while the number of program completers (n=562) represents 38% of the grant target. As of this mid-point evaluation, C&A cannot reach a conclusion regarding grant progress associated with employment wage increases as UI employment and wage data at the unit level has not yet been provided to the TPE. As of April 24, 2017, Consortium leadership reports the delay in providing the TPE with UI and wage data is due to the Missouri Division of Workforce Development (DWD) request for a modification to the consortium-DWD data sharing agreement to include a cyber security liability clause. Consortium leadership has informed the TPE that such a clause is in place and the consortium will be able to provide unit-record UI and wage data to the TPE by June 30, 2017.

Finally, it is the opinion of C&A that partner colleges and the consortium are documenting and using lessons learned to improve grant performance and overall grant management. In addition, colleges and the consortium are sharing such information to support both campus-based and statewide scaling and sustainability of successful grant innovations.

As transformative change efforts progress they often encounter challenges, and MoSTEMWINs is no exception to this rule. Mid-point evaluation data suggest the consortium and its member colleges may face the following challenges as they move toward final implementation.

- Participant recruitment
- Funding to sustain successful grant innovations beyond the life of the grant.
- Grant staff retention

- Barriers created by existing college systems and practices
- Providing staff development opportunities for peer-to-peer learning and sharing
- Connecting grant innovations with college and Statewide policy development
- Securing UI employment and wage data required for the DOL-approved evaluation plan.

## Introduction

This interim evaluation report describes the mid-point implementation of Missouri's Round 4 Trade Adjustment Assistance Community College and Career Training (TAACCCT) statewide grant. The Missouri STEM Workforce Innovations Network (MoSTEMWINs or MSW) consortium is comprised of the 12 community colleges (two urban and 10 rural) and one statewide technical college. MoSTEMWINs was formed to provide opportunities for Missouri's Trade Adjustment Assistance (TAA) eligible, long-term unemployed and other dislocated workers to obtain strong science, technology, engineering and math (STEM) skills tied to occupations in the state's targeted and growth economic clusters.

Metropolitan Community College (MCC), of Kansas City, Missouri, serves as the grant's host institution. Metropolitan Community College is partnering with the Missouri Community College Association (MCCA) to administer the grant and manage processes related to program implementation, TAA-guidelines and compliance, data collection and performance reporting, and statewide collaboration and information sharing. Both MCC and MCCA offer an appropriate and experience set of professional staff to ensure the effective management of this statewide effort.

As outlined in the grant narrative<sup>1</sup>, MoSTEMWINs is designed to address the following three primary strategies.

**Table 1. MoSTEMWINs Statement of Work Strategies**

<b>Strategy 1: Accelerate Entry into Career Programs—</b>
by refining assessment, transforming developmental education and adding support services to meet the needs of TAA-eligible and other participants
<b>Strategy 2: Create Clear Pathways to STEM Careers —</b>
by expanding access to/ developing new stacked and latticed credentials in programs that meet employer needs
<b>Strategy 3: Improve Employment Attainment—</b>
by working with industry, local WIBs, the state, and community-based organizations to engage, guide and employ participants

## Evaluation Questions

This interim evaluation report is the third in a series of Evaluation Progress Reports (EPRs)<sup>2</sup> through which the third-party evaluator (TPE) Cosgrove & Associates (C&A) provides on-going evaluation to the MoSTEMWINs consortium regarding grant processes, program/strategy implementation, progress toward performance outcomes, and possible areas for sustainability or future scaling. Evaluation Progress Report #1 examined initial grant processes, consortium organization, and plans for grant start-up, while EPR #2 reviewed campus and consortium baseline data after year 1 implementation. This evaluation report is inclusive of grant activity from the start of the grant to end of grant year three, quarter one, and thus covers the period from October 1, 2014 through December 31, 2016. The report will direct specific attention to program and strategy implementation, employer and stakeholder engagement, and grant progress related to performance outcomes as of the grant's mid-point.

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<sup>1</sup> MoSTEMWINs Consortium Grant Application - SGA/DFA PY 13-10, 2014

<sup>2</sup> EPR #1 Round 4 MoSTEMWINs Process Evaluation Phase I Summary Report, April 2015 and EPR #2 MoSTEMWINs Baseline Evaluation Year 1 Summary Report, November 2015

Specific evaluation questions addressed in this report are presented in Table 2.

**Table 2. Interim Evaluation Questions**

Interim Evaluation Questions
<ul style="list-style-type: none"> <li>• <a href="#"><u>Are colleges partnering with employers and other grant partners to develop and/or redesign programs of study?</u></a></li> <li>• <a href="#"><u>Are colleges implementing programs and strategies as designed and with fidelity?</u></a></li> <li>• <a href="#"><u>Are colleges making appropriate progress toward grant performance targets?</u></a></li> <li>• <a href="#"><u>What are colleges learning during program and strategy implementation?</u></a></li> <li>• <a href="#"><u>What innovations/strategies appear to hold promise for future scaling and sustainability?</u></a></li> </ul>

These questions align with the Department of Labor’s guidelines related to program design and implementation; partner/stakeholder engagement and contributions; and use of grant funds to demonstrate appropriate grant progress. This report is organized around the questions presented in Table 2. Data and analyses are presented at the both the statewide consortium level as well as for each partner college.

## Evaluation Methods

Cosgrove & Associates employed multiple methods (Table 3) to secure the data necessary to evaluate statewide and individual college efforts to: engage employers and stakeholders; implement programs and strategies with fidelity; achieve grant progress and performance outcomes; and identify learning to support future sustainability and learning common across the Consortium.

**Table 3. Mid-point Interim Evaluation Methods & Data Sources**

Mid-point Interim Evaluation Methods & Data Sources
<ul style="list-style-type: none"> <li>• Mid-point or interim campus site visits included more than 250 interviews with campus grant teams, campus executive leadership, grant students, employers and community based stakeholders, and staff/leadership from local career centers. (See Appendix I for interview protocols).</li> <li>• Mid-point interviews with host institution grant team and leadership, as well as interviews with MCCA executive and grant leadership.</li> <li>• Participant observation data collected during meetings with grant Campus Leads and the Consortium Executive Team.</li> <li>• Review of grant quarterly reports submitted to DOL.</li> <li>• Review of “Pathway to Performance” reports prepared by MCCA grant management team for partner colleges.</li> <li>• Mid-point campus program and strategy implementation self-assessment. (See Appendix II for data collection tool).</li> <li>• Mid-point campus stakeholder engagement self-assessment. (See Appendix II for the complete data collection tool).</li> <li>• Analysis of unit-record grant participant and outcome data provided by MCCA as of January 20, 2017</li> </ul>

The evaluation questions and methods are consistent with the following MoSTEMWINs logic model presented in the DOL-approved evaluation plan (see Figure 1).

### MoSTEMWINs Logic Model





Figure 1. MoSTEMWINs Consortium Logic Model

Although Missouri's 12 community and one state technical colleges are partners in the MoSTEMWINs consortium, the colleges function in a decentralized manner. Thus, each college developed its own logic model to address the three MoSTEMWINs strategies. Although each college is addressing these

strategies in a manner best suited to local needs, they remain committed to the outcome chain<sup>3</sup> presented in Figure 2.

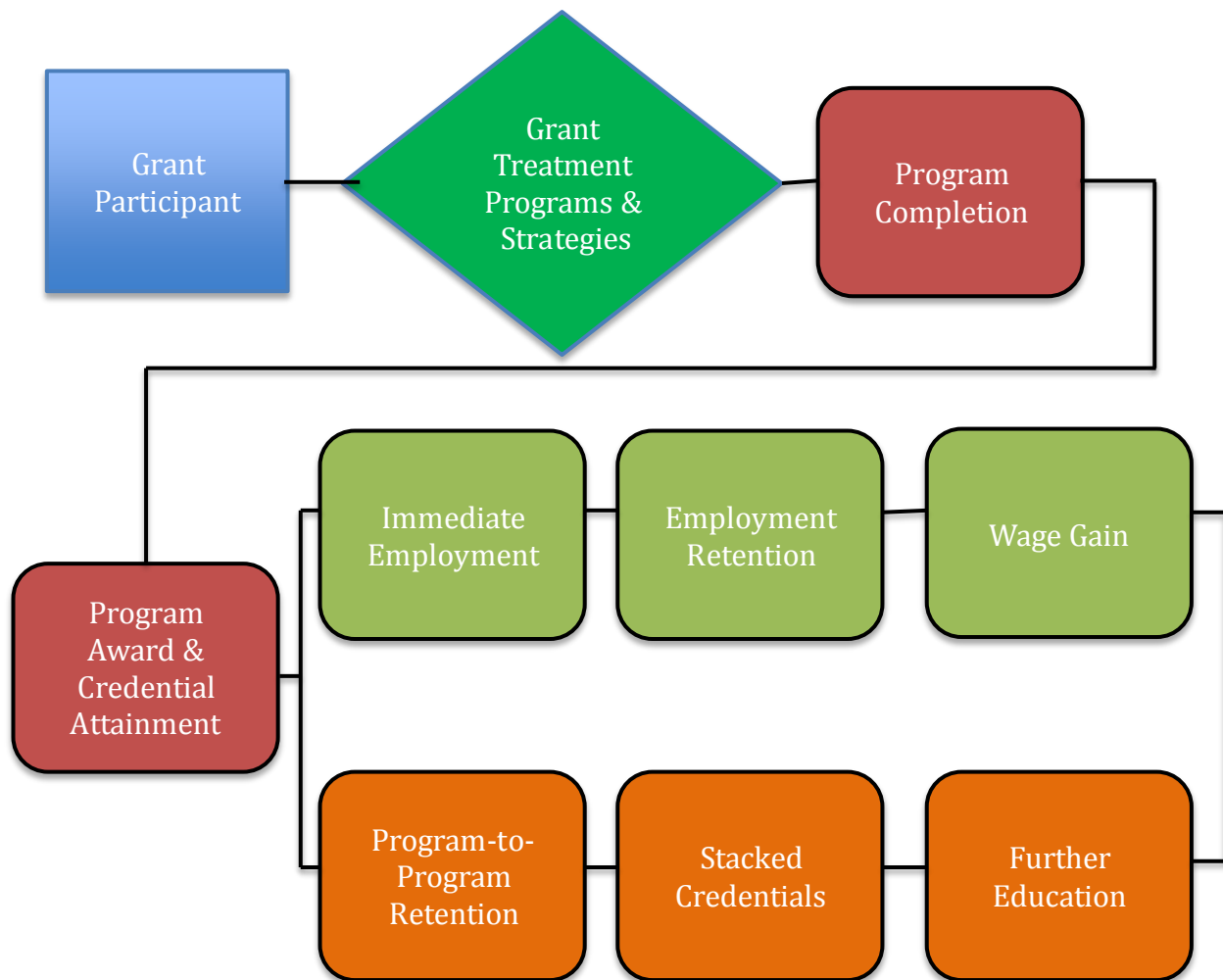


Figure 2. MoSTEMWINs Expected Outcome Chain

Transformative change efforts such as MoSTEMWINs involve complex innovations and strategies and are likely to challenge traditional evaluation models. For this reason, C&A is partnering with member colleges to implement a Developmental Evaluation<sup>4</sup> approach which allows each college to systematically track grant implementation, grant modifications, student outcomes, and the impact of MSW programs and strategies on grant participants. This evaluation approach allows C&A and the colleges to gain a deeper understanding of what is occurring within grant programs of study and the designated strategies. This deeper understanding is more likely to result in the use of evaluation results for continuous improvement and the sustainability of grant innovations beyond the life of the grant.

<sup>3</sup> Funnel and Rogers, 2011—*Outcome Chain* refers to a chain that connects program participation, program treatment/intervention to expected outcomes at the conclusion of a program.

<sup>4</sup> Patton, M., 2011 *Developmental Evaluation, Applying Complexity Concepts to Enhance Innovation & Use*.

## MoSTEMWINs Mid-Point Consortium Implementation Results

### Are colleges partnering with employers and other grant partners to develop and/or redesign programs of study?

Colleges reported partnering with more than 60 employers and/or community based organizations to develop, launch, and support grant programs of study. During interviews with the TPE, employers indicated their relationship with the college was more extensive under MSW than it had been in employer program advisory councils already in place for existing CTE programs. In addition to using employer/community engagement for program and strategy development, colleges have and continue to work with employers and community partners to support students from initial recruitment into and throughout programs to completion and employment. Such efforts demonstrate lessons learned from previous TAACCCT efforts and are expected to help students more fully connect to a STEM career pathway and employment.

Grant staff from numerous colleges referenced the value of the TAACCCT Round 1 and 2 Employer Engagement Taskforce report<sup>5</sup> which prompted colleges to be more proactive in reaching out to prospective employer partners at the planning and initial implementation stages of the MSW grant. Colleges reported this approach to employer engagement<sup>6</sup> appears to be a best practice that can be adapted and sustained by non-grant career and technical education programs.

A summary of employer comments regarding their experience of working with MoSTEM colleges are noted in Figure 3. During the mid-point campus site visits, C&A interviewed 33 employer partners. In all cases, employers expressed satisfaction with the college's efforts to reach out and engage with them to design and/or modify program curriculum and related program competencies.

From the beginning, the college listened to employer needs related to program structure and competencies, and demonstrated a willingness to use employer input to develop new program structures.

The college was both instructive and flexible in helping meet employer needs for interns. Several employers had not previously used interns, and the college worked with them to develop an intern process that met employer needs.

Employers repeatedly stressed the importance of “soft-skills” instruction designed to ensure program completers were workplace ready. Employers expressed appreciation for colleges’ efforts to embed such instruction into program curriculum.

Employers recognized the importance of continuous engagement with their college partners, and valued college efforts to provide instruction at the employer site.

*Figure 3. MSW employer engagement in practice*

In addition, during interviews with the third-party evaluators employer partners who have hired MSW students reported being more than satisfied with the overall employment preparation of the students and plan to hire additional MSW students/completers as needed. As of this report, employment follow-up data for program completers is incomplete. However, as additional program completers are hired, C&A

<sup>5</sup> MoWINs White Paper Employer Engagement Task Force Report, <https://www.skillscommons.org/handle/taaccct/3334>

<sup>6</sup> A Resource Guide to Engaging Employers, Jobs for the Future, 2015

plans to conduct follow-up surveys with employers to more fully explore employer satisfaction with program completers who they hire.

To gain a deeper understanding of stakeholder engagement with key roles and responsibilities related to the grant, each college rated such engagement for both internal stakeholders (college leaders, MoWINs project leaders, faculty, student support staff, students) and external stakeholders (employers, workforce investment board (WIB), and other educational partners). Table 4 highlights the highest overall ranking by MSW colleges of employers' level of involvement in various roles and responsibilities associated with implementing the grant. Employer average ratings are compared to the average ratings of other external grant partners (i.e., WIB, Community-based organizations, One-Stop Career Centers, etc.). Colleges used the following scale to complete this rating:

**Table 4: MSW Colleges' Self-Assessment of Employer Engagement Compared to Other Stakeholder Engagement**

Roles & Responsibilities	Level of Involvement	
	Employers Average	Average for all Stakeholders
Assist with Program Design	2.6	1.84
Connect Graduates to Employment	2.5	1.67
Identify Industry Workforce Needs	2.9	2.06
Identify Necessary Skills and Competencies	2.8	1.86
Identify, Assess, Refer Participants	2.2	1.75
Participate in Curriculum Development	2.5	1.43
Provide Financial Support	1.4	1.08
Provide Work-Based Learning Activity	1.8	0.90
Provide Support Services	1.2	1.63
Validate Curriculum	2.3	1.52

Not Involved (0), Low Engagement (1), Medium Engagement (2), and High Engagement (3).

Colleges rated employers as more involved than other stakeholders in assisting with program design; connecting graduates to employment; identifying skills and competencies; referring participants; developing and validating curriculum. Employers were rated as somewhat less involved in providing financial support, work-based learning, and support services.

Although several colleges have examples of work-placed learning in place, others report difficulties in getting employers to provide work-based learning opportunities. A positive example in this area is Jefferson College, which heeded the recommendations of the Employer Engagement Taskforce and assembled a package to make it painless for employers to develop internships.

The consortium recently (January 2017) initiated its statewide grant curriculum review process. As a part of this process, external subject matter experts will work with faculty and staff at each campus to review program curriculum and competencies. Cosgrove & Associates will work with the curriculum review coordinator to analyze information provided by the subject matter experts, to explore the extent to which program structures, curriculum and competencies align with employer needs. Such analysis will be included the C&A's final evaluation report.

## **Are colleges implementing programs and strategies as designed and with fidelity?**

As of January 2017, the colleges are offering all their designated grant programs and strategies. Using data from campus site visits as well as the MCCA's (ETO) data collection system, we can validate the 13 partner colleges are providing instruction through 38 programs of study. As of the writing of this report,

grant participant enrollment stands at 1,550<sup>7</sup>. Twenty five percent of the students are enrolled in a credit program and 75% are enrolled in a non-credit program. A full breakdown of enrollment by MSW program can be found in Appendix III.

As outlined in the grant narrative, the MoSTEMWINS' effort is more than programs of study. To increase and support student academic and employment outcomes, the grant outlined a number of specific actions related to each of the three key strategies. (see Table 5).

**Table 5. MoSTEMWINS Primary Strategies & Related Activities**

<b>Strategy 1: Accelerate Entry into Career Programs by refining assessment, transforming developmental education, adding support services to meet needs of TAA-eligible/other participants.</b>
Align basic skills and digital literacy with occupational courses and programs
Accelerate program entry through contextualized courses
Accelerate program entry through Developmental Education redesign
Accelerate program entry through Competency-based Education (CBE) methods
Develop a STEM Readiness Portal for entering students providing assessment, career counseling, academic advising, remediation and orientation to STEM programs
Accelerate program completion through a combination of flexible delivery times and modalities
Improve online and technology-enabled learning options and hands-on labs
Adapt career pathway portal to programs
Enhance advising to participants
Conduct professional development for faculty and staff
Connect grant innovations to overall college processes
<b>Strategy 2: Create Clear Pathways to STEM Careers by expanding access to/developing new stacked and latticed credentials in programs that meet employer needs.</b>
Map education and career pathways and stackable credentials
Identify & validate courses, competencies, and credentials with business & industry
Articulate Credit for Prior Learning processes for target programs
Assess and offer credit for prior learning and competencies
Establish transfer and articulation agreements
Offer credit for prior learning, noncredit courses, OJT, military experience and other competencies
<b>Strategy 3: Improve Employment Attainment by working with industry, local WIBs, the state, and community-based organizations to engage, guide and employ participants.</b>
Develop career exploration education for participants
Career navigators collaborate with WIBs, working on-site when possible
Enhance working relationship with WIBs & planning councils to recruit, refer, and help place students
Enhance working relationship with employers and industry consortia to recruit, refer, and help place students
Enhance working relationship with social agencies to recruit, refer, and help place students
Enhance career navigation services
Scale up industry internships
Assess employer satisfaction with internship programs; modify as necessary

<sup>7</sup> Data source MCCA ETO data collection system, January 20, 2017

It is important to note that although all 13 partner colleges are working to address each of the three primary strategies, not every college is undertaking each activity within each primary strategy. To further explore college efforts related to strategies and activities, C&A collected data from each college to evaluate the extent to which a college is implementing both strategies and activities. The following scale was used to evaluate such implementation.

- Rating of 0 = Not Planned: this activity is not relevant to this college's MSW grant.
- Rating of 1 = Planning but Not Started: this activity is being planned as part of the grant but implementation has not begun.
- Rating of 2 = Advancing Implementation: implementation is occurring on an on-going basis; however, changes or advancements will continue during the grant.
- Rating of 3 = Mature Implementation: implementation has reached the highest level and no additional changes or modifications are expected during the grant.
- Rating of 4 = Sustaining Implementation: the college has made a formal, tangible commitment of resources (budget, people, facilities) to continue this activity beyond the grant.

Consortium results from this data collection are presented below. Analysis of similar results for each campus are presented on pages 23-92 of this report.

Figure 4 depicts the average for each of the 13 colleges' self-assessments of the activities attendant to Strategy 1 and shows colleges view themselves as having reached a mature level of implementation with the lowest scores for the activity centered around the implementation of Competency-Based Education methods. Although grant programs have been developed using curriculum designed around employer validated competencies, few programs are self-paced and allow student to progress based upon competency mastery. Jefferson College has taken a lead role to identify, research, and examine the potential benefits and challenges associated with CBE and has produced a Competency-Based Education Discovery Document. Jefferson College has shared this documents with other partner colleges for review and further discussion.

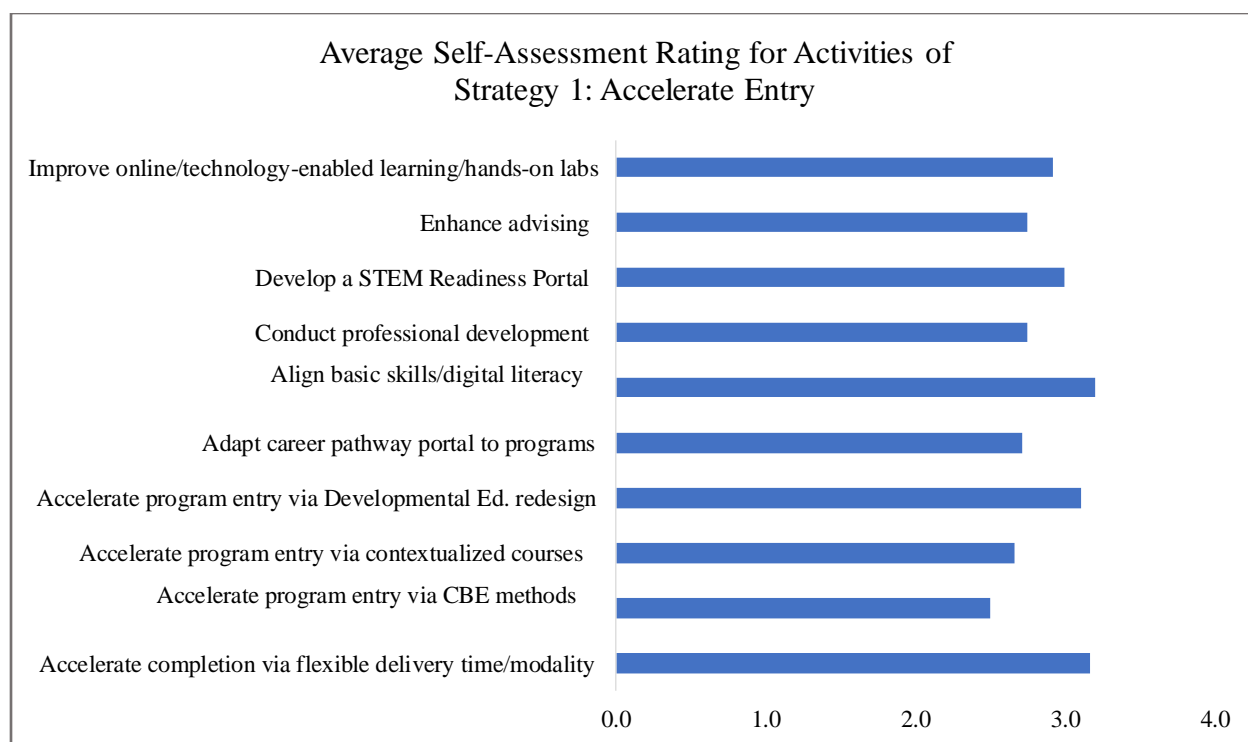


Figure 4. Average self-assessment rating by the colleges implementing each Strategy 1 activity.

The MSW colleges' self-assessments of the implementation of the activities associated with accelerating entry (Strategy 1) are presented below in Table 6. These data reveal that most activities fall into the advancing implementation category as one would expect at grant mid-point.

To further explore college implementation of Strategy 1 activities, C&A used each college's implementation ratings to help guide individual campus site-visits and related interviews with faculty, staff and employers. By triangulating data sources (campus reports, site-visit observations, and campus interviews), C&A could develop a more comprehensive understanding of colleges' efforts to advance implementation from initial to more mature stages. This analysis brought to light the following results.

- Colleges are obtaining learning materials from Open Educational Resource (OER) repositories as well as posting material developed with grant funds.
- Although all colleges are working to implement enhanced advising/support services, many colleges expressed concerns associated with the ongoing costs of such efforts.
- The use of "portal-type" programs to help students move into STEM programs continues to grow in popularity. One college has received U.S. Department of Education recognition for its portal program and continues to share its experiences with other consortium colleges.
- Colleges reported the value of more fully aligning and contextualizing basic skills developmental education to program coursework. Colleges are sharing information with each other to use this approach to accelerate entry into STEM programs/pathways for academically under-prepared students.
- Program flexibility and acceleration is valued by students and employers. As such, colleges are continuing to explore ways to adopt existing internal practices and policies to better align with flexible/accelerated program structures.



**Table 6. College Self-Assessment of Implementation of Strategy 1 Activities**

<b>Strategy 1: Accelerate Entry into Career Programs by refining assessment, transforming developmental education, adding support services to meet needs of TAA-eligible/other participants</b>						
<b>Strategy 1 Activities</b>	<b>Number of Colleges at each Level of Implementation</b>					
	Not Planned	Planned but not started	Initial	Advancing	Mature	Sustaining
Improve online and technology-enabled learning options and hands-on labs	0	0	0	6	3	4
Enhance advising to participants	0	0	0	7	3	3
Develop a STEM Readiness Portal for entering students providing assessment, career counseling, academic advising, remediation and orientation to STEM programs	7	0	0	2	2	2
Conduct professional development for faculty and staff	0	0	0	5	5	3
Align basic skills and digital literacy with occupational courses and programs	3	0	0	3	2	5
Adapt career pathway portal to programs	5	1	0	2	3	2
Accelerate program entry through Developmental Education redesign	3	0	0	3	4	3
Accelerate program entry through contextualized courses	3	0	0	5	4	1
Accelerate program entry through Competency-based methods	2	1	0	4	5	1
Accelerate program completion through a combination of flexible delivery times and modalities	0	0	0	3	4	6

The second strategy for MoSTEMWINs is to Create Clear Pathways to STEM Careers by expanding access to/developing new stacked and latticed credentials in programs that meet employer needs. Figure 5 below shows MSW colleges' self-assessment ratings for each of the activities associated with this strategy and indicates that colleges view themselves as approaching mature implementation for these activities.



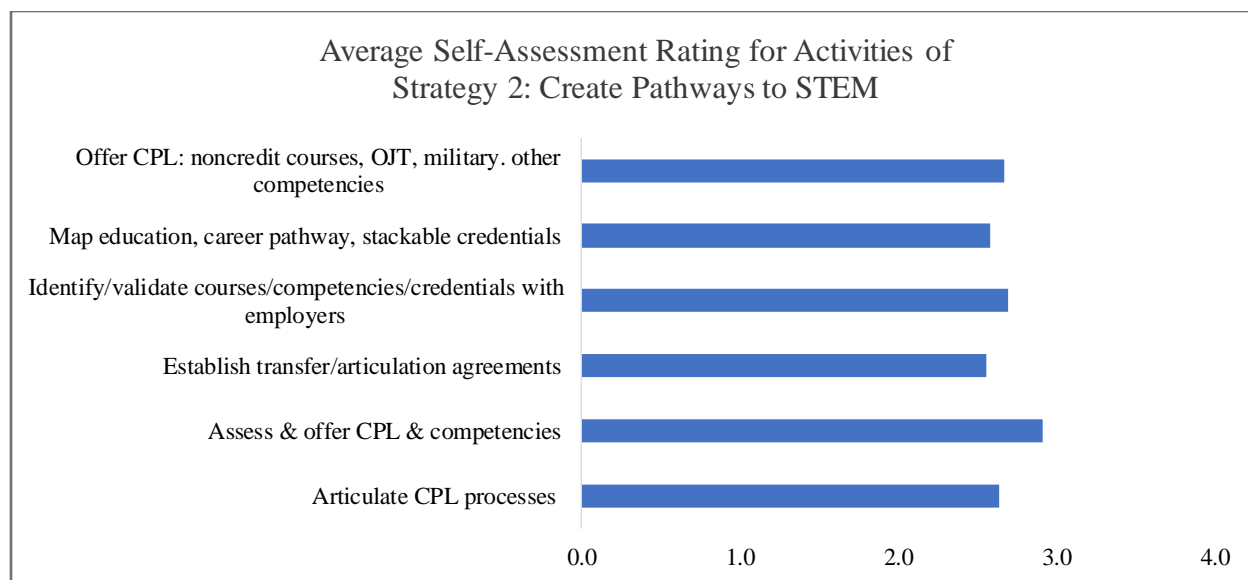


Figure 5. Average self-assessment rating by the colleges implementing each Strategy 2 activity.

The colleges' overall self-assessment of the activities associated with creating pathways to STEM careers are approaching the mature level of implementation. The project narrative associated with Strategy 2 states: "In all industries selected, the driving design factor is ensuring that MoSTEMWINs activities result in stronger career pathways for participants, with clearly stacked and latticed opportunities. Each member college has developed strategic plans of action for their targeted programs of study based on differences in regional employer needs."

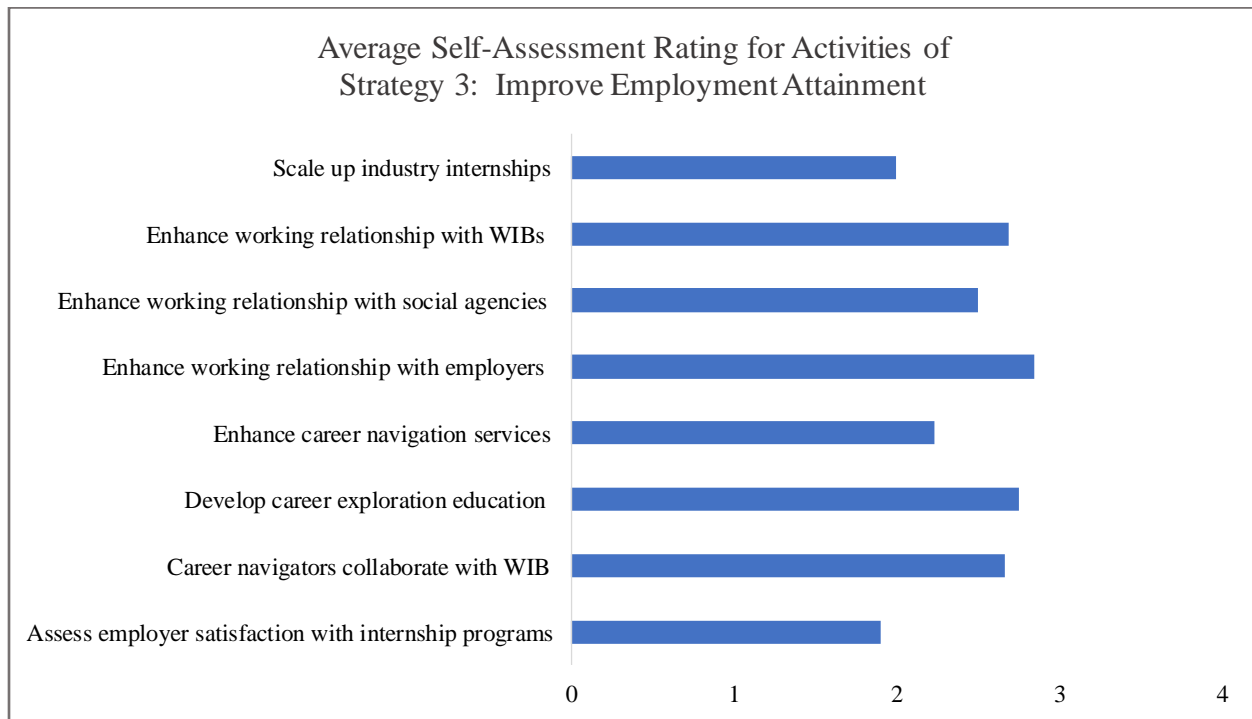
To more fully explore consortium efforts related to this strategy, C&A again triangulated data sources (campus reports, site-visit observations, and campus interviews), to gain a deeper understanding of colleges' efforts to advance implementation from initial to more mature stages. This analysis revealed the following key points.

- Twelve colleges have made significant progress (advancing implementation or greater) with regard to Credit for Prior Learning practices/processes, however, this process is more seamless at some colleges than at others. Several colleges reported that although Credit for Prior Learning processes are becoming more widely accepted, the burden to secure "credit" still falls upon the student and often involves a somewhat cumbersome set of steps.
- Also in regard to Credit for Prior Learning, a few colleges reported progress in the use of such processes to further support the connection/bridge between non-credit programs and credit programs. However, the majority of the colleges reported there is still significant work to be done in developing non-credit to credit bridges.
- The mapping of career programs and the use of industry-recognized stackable credentials to more clearly describe STEM career pathways is growing in popularity.

**Table 7. College Self-Assessment of Implementation of Strategy 2 Activities**

Strategy 2: Create Clear Pathways to STEM Careers by expanding access to/developing new stacked and latticed credentials in programs that meet employer needs						
Strategy 2 Activities	Number of Colleges at each Level of Implementation					
	Not Planned	Planned but not started	Initial	Advancing	Mature	Sustaining
Offer CPL: noncredit courses, OJT, military. other competencies	1	0	0	7	2	3
Map education, career pathway, stackable credentials	1	1	0	4	4	3
Identify/validate courses, competencies, credentials with employers	0	1	0	4	5	3
Establish transfer/articulation agreements	4	1	0	4	2	2
Assess & offer CPL & competencies	1	0	0	5	2	5
Articulate CPL processes	2	0	0	7	2	2

Regarding Strategy 3, the project narrative states: “Strategy 3 focuses on aggressively seeking out employment and internship opportunities and connecting participants to them.” Figure 6 below depicts the colleges’ self-assessment of the implementation of each of the activities associated with improving employment attainment. For the most part, MSW colleges have rated their implementation at advancing to mature.



*Figure 6. Average self-assessment rating by the colleges implementing each Strategy 3 activity.*

Regarding the activities associated with Strategy 3, employer engagement ratings align with the information colleges reported regarding stakeholder engagement and are supported by TPE interviews with faculty, staff, employers, and students. Furthermore, interview data revealed employers are eager to work with the colleges to develop and continuously improve program structures, competencies, and delivery modes. Several colleges reported an increase in partnership/engagement efforts with Community Based Organizations (CBOs). In such instances, the CBO partner has helped recruit students and assist in finding employment for program completers. One college has made strides in its work with the State Department of Corrections and is offering a Digital Literacy course to soon-to-be-released inmates.

Regarding career exploration education and career navigation services, most colleges employ the same navigator/advisor to provide services from recruitment to career assistance, while others have separate navigator/advisors who focus primarily on career services and job placement. Navigators/advisors interviewed by C&A all reported the use of LMI information, and the value of working with faculty and employers to develop mock interviews, job fairs, and seminars related to resume writing, business-etiquette, and the importance of soft-skills.

Interviews with college personnel and staff at local career centers/Workforce Investment Boards (WIBs), reveal that relationships vary across state. Most colleges report relationships have improved since the Round 1 TAACCCT grant. College and WIB staff point to the value of one-on-one personal connections as the key to improved relationships. Staff from both areas agree the primary role of the WIB is to provide supportive services.

**Table 8. College Self-Assessment of Implementation of Strategy 3 Activities**

<b>Strategy 3: Improve Employment Attainment by working with industry, local WIBs, the state, and community-based organizations to engage, guide and employ participants</b>						
<b>Strategy 3 Activities</b>	<b>Number of Colleges at each Level of Implementation</b>					
	Not Planned	Planned but not started	Initial	Advancing	Mature	Sustaining
Scale up industry internships	3	3	0	3	2	2
Enhance working relationship with WIBs and planning councils to recruit, refer, and help place students	0	0	0	8	1	4
Enhance working relationship with social agencies to recruit, refer, and help place students	1	0	0	8	2	2
Enhance working relationship with employers and industry consortia to recruit, refer, and help place students	0	0	0	7	1	5
Enhance career navigation services	0	1	0	9	1	2
Develop career exploration education for participants	1	1	0	4	3	4
Career navigators collaborate with WIBs, working on-site when possible	1		0	7	2	3
Assess employer satisfaction with internship programs; modify as necessary	3	3	0	3	3	1

## Are colleges making appropriate progress toward grant performance targets?

The consortium acquired Social Solutions ETO as its data collection, management and reporting software system. The ETO system has been implemented and MCCA staff have provided staff development and guidance for college staff to assist with grant participant and outcome data collection. Member colleges are using ETO to enter such data through a variety of methods. Some colleges continuously enter participant and outcome data directly into the statewide ETO database, while other colleges have chosen to “batch up-load” participant data files according to college timelines connected to their program start-up and program completion.

Cosgrove & Associates is relying on the consortium to secure the most up-to-date and accurate data related to grant enrollment, program completion, and employment. For the purposes of this mid-point evaluation, C&A requested a full, de-identified, unit-record file for all grant participants enrolled as of January 20, 2017, as well as program completion and employment data. The consortium provided this file, however employment follow-up and wage data were not yet available. Cosgrove & Associates used the available data to compare actual enrollment and program completion to stated performance targets. This comparison reveals that the consortium has achieved 84% of its enrollment target and 38% of its program completion target. Although employment data for non-incumbent, program completers were not available as of this report, the MSW consortium has completed the MOU with the Missouri DWD and reports that such data will be available in 2017. This analysis is presented in Figure 7<sup>8</sup>.

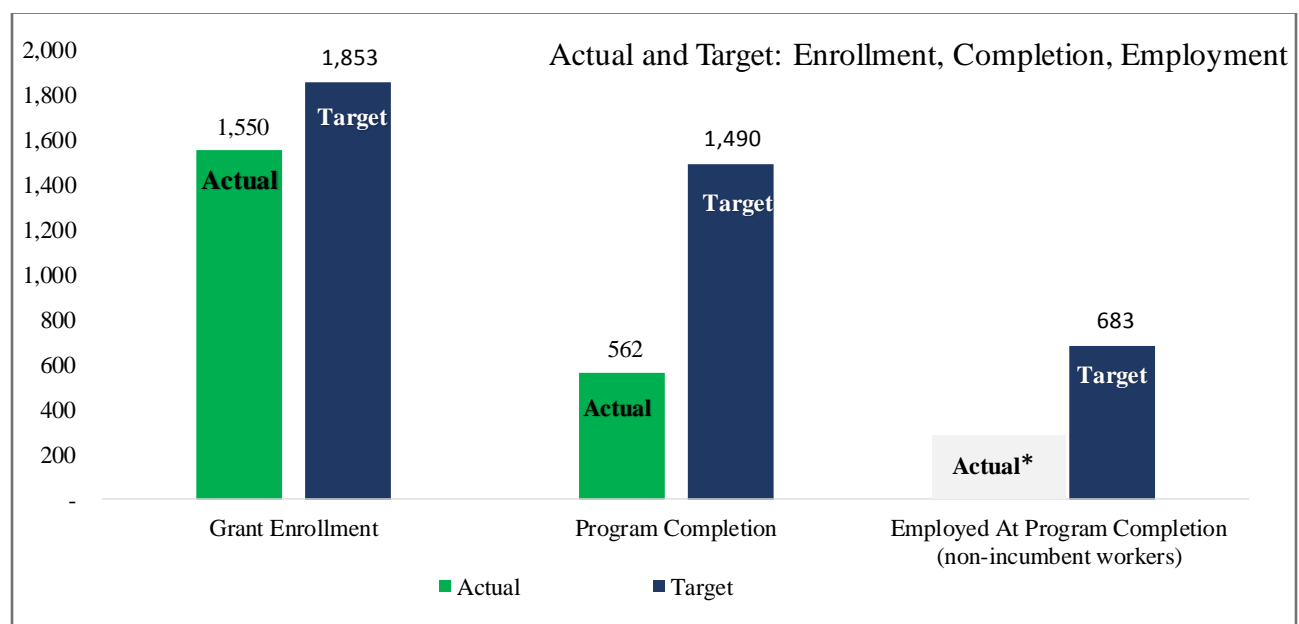


Figure 7. Actual Grant Enrollment, Program Completion, and Employment Compared to Grant Stated Performance Targets \*Data for actual employment of non-incumbent, program completers not yet available.

The average age of MoSTEMWINs participants is 36 years old. Forty-five percent of the participants are female and 34% are minority. Thirty percent are enrolling in college for the first time. Three percent are TAA-eligible, and nine percent hold Veteran status. Forty-seven percent were unemployed when they started their grant program and 40% were under-employed when they started their program. Table 9 provides a complete profile of MoSTEMWINs participants.

<sup>8</sup> Data source is MCCA ETO data system as of January 20, 2017.

**Table 9. MoSTEMWINs Participant Profile (n = 1,550)**

<b>Gender:</b>	<b>Count</b>	<b>Percent</b>
Male	815	52.6
Female	697	45.0
Missing Data	38	2.5
<b>Ethnicity</b>	<b>Count</b>	<b>Percent</b>
American Indian/Alaskan Native	7	0.4
Asian	31	2.0
Black/African-American	325	21.0
Hispanic	116	7.5
White	979	63.1
More than 1 race	12	0.8
Not specified or Other	49	3.2
Missing Data	31	2.0
<b>Prior Education Before Grant Start-Up</b>	<b>Count</b>	<b>Percent</b>
Less than high school	51	3.3
High school graduate/GED	528	34.1
Some college, No degree	625	40.3
Associate's degree	127	8.2
Bachelor or More	173	11.2
Missing Data	46	3.0
<b>Employment Status at Program Start</b>	<b>Count</b>	<b>Percent</b>
Not Employed	734	47.4
Under Employed	625	40.3
Employed	163	10.5
Missing Data	28	1.8
<b>TAA-Eligible</b>	<b>Count</b>	<b>Percent</b>
Yes	51	3.3
No	1,471	94.9
Missing	28	1.8
<b>Veteran Status</b>	<b>Count</b>	<b>Percent</b>
Yes	141	9.1
No	1,362	87.9
Missing Data	47	3.0

The profile data presented in Table 9 provide evidence the partner colleges are enrolling grant designated populations in their programs of study.

Participant and program completion data provided to the TPE suggest the consortium is making appropriate progress in regard to serving the target population and in meeting stated grant targets related to enrollment and program completion. Although the lack of unit-record employment and wage data required to evaluate progress toward employment and wage targets limits the TPE's mid-point evaluation in regard to these metrics, Consortium leadership has now informed the TPE that the consortium will be

able to provide unit-record UI and wage data to the TPE by June 30, 2017. Such data are central to the TPE’s outcome and impact evaluation efforts. The TPE recognizes the consortium has worked to resolve this concern and looks forward to receiving unit-record, participant employment and wage data.

## What are colleges learning during program and strategy implementation?

Given the complex nature of developing innovative instructional programs and student support strategies across 13 decentralized colleges, the MoSTEMWINs consortium anticipated colleges would likely encounter challenges and be required to adapt programs and strategies along their MoSTEMWINs journey. To track and explore such information in a systematic manner and support both college and consortium-wide use of data for continuous improvement, C&A collected information related to accomplishments, challenges, and lessons learned through the mid-point self-assessment tool. Such data were confirmed and discussed during mid-point campus and consortium management site visits and interviews. Data were collected through interviews with campus grant leadership, faculty, students, and program advisors/navigators.

Table 10 summarizes common challenges identified by colleges whereas Table 11 presents common areas where Consortium colleges are learning from MoSTEMWINs experiences.

**Table 10. Common Challenges Faced by Partner Colleges**

Challenges Common Across MoSTEMWINs Partner Colleges
<ul style="list-style-type: none"> <li>• Innovative programming that does not conform to the standard term-based and course schedule, and allows for open entry and flexible program completion can challenge existing college processes, practices, and information/data systems. Existing “organizational silos” can amplify this challenge.</li> <li>• Even when grant innovations have demonstrated increases in student engagement and increases in student academic and employment outcomes, connecting such innovations/strategies to mainstream college practices/processes is challenging.</li> <li>• Given that grant staff are only supported by grant funds, it can be difficult to attract and maintain appropriate grant staffing.</li> <li>• Intrusive student support services and student success teams consisting of advisors, navigators, and program faculty add costs to institutional budgets and may be difficult to sustain when grant funding ceases.</li> <li>• A number of colleges noted that with the increase in Missouri’s employment picture, it has become increasingly difficult to recruit students to MoSTEMWINs programs of study.</li> </ul>

**Table 11. Learning Common among Partner Colleges**

Learning Common among MoSTEMWINs Partner Colleges
<ul style="list-style-type: none"><li>• Intrusive student support and intentional advising when directly connected to programs of study and career pathways is helping to increase both student engagement and student outcomes.</li><li>• The early and accelerated use of “on-boarding” and instructional support services provided through portal-like programs which are connected to career pathways is helping increase both student engagement and student outcomes.</li><li>• Student success teams consisting of advisors, navigators, and program faculty are valued by faculty and students.</li><li>• Accelerated and modularized programs of study, built upon stackable credentials and career pathways are valued by students and employers.</li><li>• Accelerated and contextualized developmental education efforts which are supported by student support services and faculty teams are helping increase the rate at which non-college ready students transition into college-level coursework.</li><li>• Systematic, college-wide information sharing and communications are needed to help connect successful grant innovations to mainstream college practices and processes.</li><li>• Credit for Prior learning systems and processes can be used to successfully bridge non-credit instruction/credentials to credit based programs.</li><li>• The systematic collection and appropriate use of student background data can assist in developing models for “learning analytics” to help predict those students most in need of support and provide information needed to connect such support to common instructional “stress-points” and “gate-keeper” problem areas.</li></ul>

## **What innovations/strategies appear to hold promise for future scaling and sustainability?**

It was five years ago, due to TAACCCT Round 1, that Missouri’s two-year colleges first began to work as a Consortium. This experience of working together lead to near unanimity as to the benefits of cooperative efforts for individual colleges and for the State. In the words of one long-time college leader, the Consortium worked. This view was first expressed at the end of Round 2 and by the mid-point of Round 4, College leaders across the state share this refrain. Over the course of TAACCCT, the colleges have agreed upon policies relating to grant definitions, policies, and procedures. Rounds 1 and 2 were, in large part, managed by MCCA with the host colleges serving a fiscal agent role. With Round 4, the management role of the host institution has grown. The result is that the State now has multiple models for managing a consortium.

In exploring this question for MoSTEMWINs, it is important to note Missouri’s community colleges and state technical college have benefited from grant resources and experiences related to previous TAACCCT grants (statewide Rounds 1 and 2 as well as three individual and one national consortium TAACCCT awards), and have demonstrated the capacity to continue to evaluate and scale innovations from these previous grants. As MoSTEMWINs enters the second half of the third year, the following innovations/strategies appear to hold promise for future scaling and sustainability.

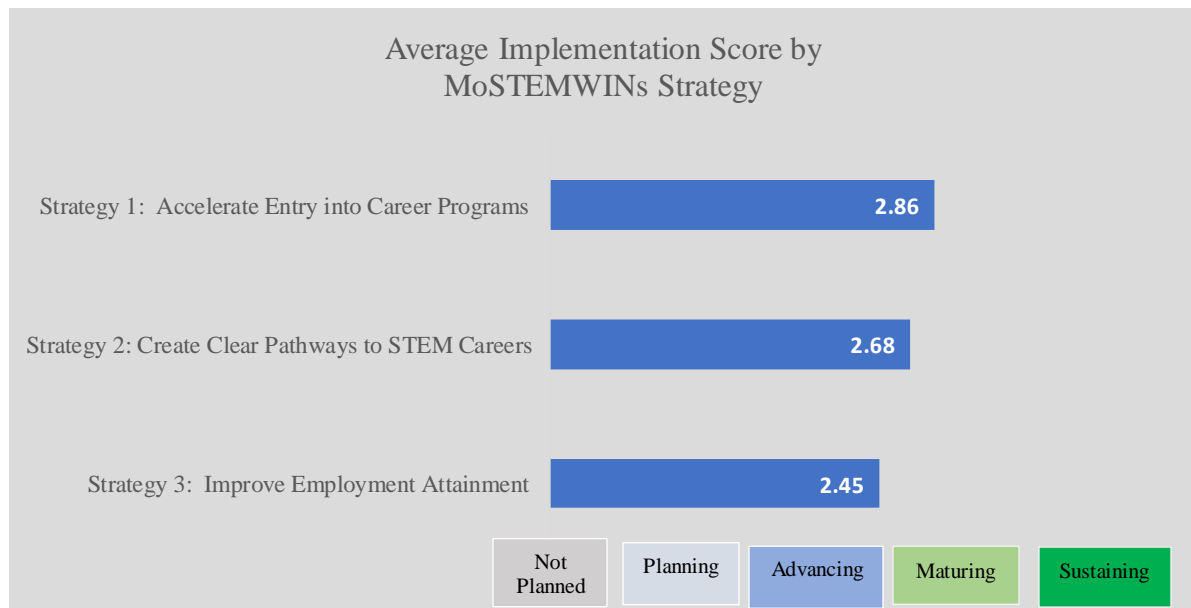
- Development of career pathways using industry recognized stackable credentials and degrees/awards.
- Continuous employer engagement using a ladder approach that stresses employer engagement from program design/creation through instructional support and onto program completion and employment for students.



- Intrusive and intentional student support services which are directly connected to programs and faculty. Efforts to provide such services along a continuum from initial recruitment/enrollment and thru program completion and onto employment appear to be especially promising.
- Accelerated and contextualized efforts to reform developmental education efforts.
- Continued use and expansion of Credit for Prior learning systems and practices.

## MoSTEMWINs Mid-Point Implementation Summary & Discussion

Based upon mid-point implementation data, C&A can conclude MoSTEMWINs partner colleges have connected to local employers in significant ways. Colleges are using employer input/engagement for program creation/development and ongoing support, as well as partnering with employers to secure employment opportunities for program completers. In addition, it is the opinion of C&A that the consortium has implemented grant programs and strategies with fidelity and is making appropriate progress toward mature implementation. The overall self-assessment of implementation score for each of the three primary strategies is presented below.



*Figure 8. Average Self-Assessment for MoSTEMWINs Strategies.*

Further analysis of implementation scores for each of the activities contained within each strategy reveals that colleges have made the most progress in the following areas.

### **Strategy 1: Accelerating Entry into Career Programs**

- Accelerate program completion through a combination of flexible delivery times and modalities---Average Implementation Score = 3.2
- Align basic skills and digital literacy with occupational courses and programs---Average Implementation Score = 3.2
- Accelerate program entry through Developmental Education redesign---Average Implementation Score = 3.1



- Develop STEM Readiness Portal for entering students providing assessment, career counseling, academic advising, remediation, and orientation to STEM programs---Average Implementation Score = 3.0

### **Strategy 2: Create Clear Pathways to STEM Careers**

- Assess and offer Credit for Prior Learning and competencies---Average Implementation Score = 2.9
- Identify/validate/courses/competencies with employers---Average Implementation Score = 2.7

### **Strategy 3: Improve Employment Attainment**

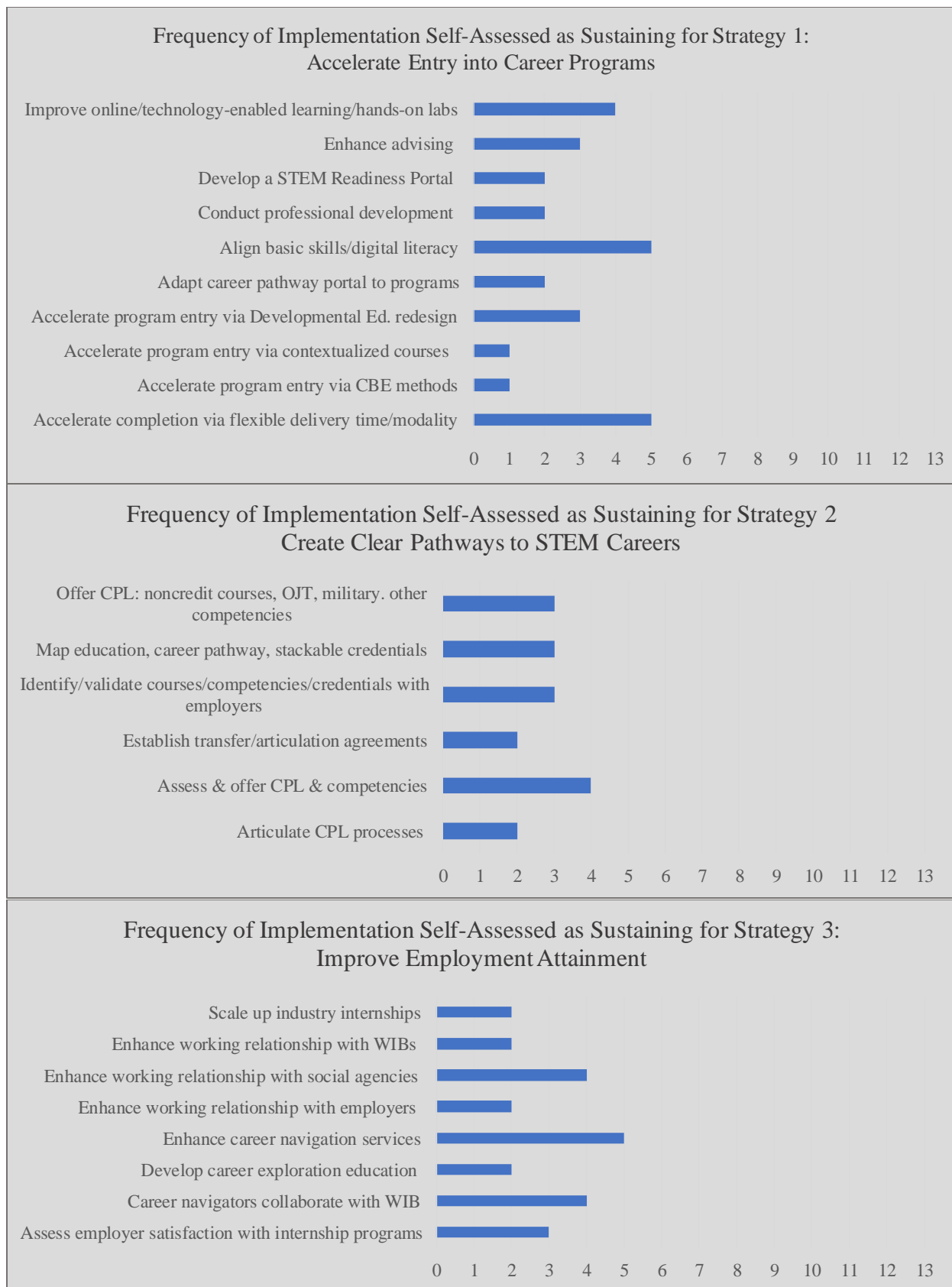
- Enhance working relationships with employers and industry consortia to recruit, refer, and help place students---Average Implementation Score = 2.8
- Develop career exploration education for participants---Average Implementation score = 2.8

With recognition that employer engagement and program/strategy implementation are firmly in place, we turn our attention to grant targets related to: participant enrollment; program completion; and employment and wage gains. Available program participant and program completion data reveal that the consortium is making progress toward participant enrollment and program completion grant performance targets.

As of the writing of this report, C&A was not provided with employment and/or wage data, thus we are not able to reach a conclusion regarding whether the employment and wage gains for program completers are consistent with grant employment and wage performance targets. However, employer feedback collected during campus site visits does suggest that employers are hiring program completers and are satisfied with the employment preparation of such program completers.

Depending on local needs each college is addressing their MoSTEMWINs goals in a different way. Despite these varying efforts, the colleges have arrived at a common set of possible best practices and steps to increase student academic and employment outcomes, as well as employer satisfaction with program completers. As the colleges continue to share and explore such practices, they are identifying grant innovations which may hold promise for further scaling and sustainability beyond the grant.

Figure 9 presents the number of colleges who rated activities as having reached the Sustaining stage of implementation for each of the three primary strategies.



*Figure 9. Frequency of Sustaining Implementation Self-Assessment.*

## Observations Regarding Consortium Accomplishments & Challenges

As the colleges push forward with program and strategy development, and seek to sustain successful practices, they are continuing to receive support from each other and from the statewide MoSTEMWINs consortium. Such support is provided through a partnership between Metropolitan Community College (MCC is the grant host institution) and the Missouri Community College Association (MCCA). In addition, consortium grant leadership (MCC and MCCA) meets with the grant Executive Advisory Committee<sup>9</sup> several times a year to share grant progress, provide updates, and gain advice related to overall grant management, expenditures, and performance. When necessary, the Executive Advisory Committee makes decisions related to resource re-allocation and individual campus performance status.

Although a certain level of consortium support might be expected, it is important to note the MoSTEMWINs consortium is more than bureaucratic grant support. The joint grant management approach between a host college and MCCA is new with Missouri's Round 4 grant and has evolved over the first two years of the grant. In C&A's baseline evaluation report<sup>10</sup> it was noted that an appropriate and experienced grant leadership team was in place at MCCA and the host college, Metropolitan Community College (MCC), had designated staff to work with MCCA staff to ensure compliance with TAACCCT guidelines. At that time, MCC and MCCA were working together to develop and define specific roles and responsibilities related to such efforts. As of the mid-point evaluation, grant leadership from both MCCA and MCC report progress associated with their joint management efforts, and have come to understand the value of injecting a campus/college perspective into statewide grant management processes.

Across the State, campus-based leadership, staff, and faculty appreciate the statewide consortium and especially value the opportunity to share best practices and lessons learned among themselves. The consortium has created a space/environment for statewide discussions and information among community college practitioners. Specifically, campus leadership and staff note the following consortium efforts as beneficial:

- Statewide campus grant leadership meetings allow for peer-to-peer learning and relationship building.
- Statewide documentation associated with: grant compliance, budget/expenditures, and overall performance management.
- Statewide staff development tied to specific grant strategies.
- Distribution of Labor Market Information (LMI) related to STEM workforce opportunities.
- Statewide staff development meetings for campus staff engaged in intentional student support/advising/navigation.

Furthermore, the Missouri Community College Association has leveraged current and previous consortia efforts and collaboration to support a new community college, statewide strategic planning process. The connection between TAACCCT grant efforts and MCCA's strategic planning continues to develop, especially for the following statewide initiatives: college-employer engagement and partnerships; career pathway development using industry-recognized stackable credentials; increased intentional student support; re-design of developmental education; and credit for prior learning. To further assist in

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<sup>9</sup> The Executive Advisory Committee consists of representatives from Statewide agency grant partners, MCCA Presidents/Chancellors Council, MCC grant leadership, and MCCA grant leadership

<sup>10</sup> MoSTEMWINs Baseline Year 1 Implementation Evaluation Summary Report, November 2015

connecting consortium efforts to statewide community college practices, MCCA grant leadership now attends the statewide Chief Academic Officers meetings.

As transformative change efforts progress they often encounter challenges, and MoSTEMWINs is no exception to this rule. Mid-point evaluation data suggest the consortium and its member colleges will continue to face the following challenges as they move toward final implementation and seek to expand enrollment and program completion, and secure employment for program completers.

### **Participant Recruitment**

Participant recruitment is a challenge at many colleges. In some rural areas, colleges are finding it difficult to attract students to the programs even when such training leads to plentiful jobs. Those colleges focusing on manufacturing cite the stigma of manufacturing and are working with elementary and secondary schools and parents to provide a more realistic picture of today's manufacturing workplace. In the urban areas, the colleges are finding that they have a low percentage of applicants who make it from initial interest to actual enrollment. For the most part, colleges are no longer able to rely on referrals from career centers. Although some colleges continue to value co-location, others report that their staff time is more productively spent in other recruitment venues. Furthermore, colleges with programs that require drug testing report an increasing number of applicants are unable to pass drug screening.

### **Funding & Statewide Budget Reductions**

Innovations that began in Round 1 and continued in Round 2, and are reaching maturity in Round 4 have been made possible and supported by grant funds. Colleges are now seeking strategies to help sustain those innovations in an environment of reduced funding. Colleges may benefit from developing analysis to forecast projected costs/savings and potential benefits/return on investment related to such innovations.

### **Grant Staff Retention**

Staffing continues to be problematic particularly for rural colleges as they seek to find and retain qualified instructors for technical programs. In addition, as the grant nears its final stages, colleges fear losing key grant staff if they cannot secure institutional funds to support such staff beyond the life of the grant.

### **Existing College Systems & Practices**

At times, existing college systems and processes are at odds with innovations. This challenge seems especially problematic as colleges continue to develop flexible and accelerated programs based upon open-entry enrollment and open-exit completion points. Existing college/federal financial aid guidelines further complicated this situation.

### **Staff Development Opportunities for Peer-to-Peer Learning and Sharing**

The consortium continues to provide staff development for grant leadership and staff to stay abreast of grant guidelines and performance, as well as share best practices among each other. Campus staff view such support as important and have expressed an interest in additional opportunities for peer-to-peer learning and sharing.

## **Connecting Grant Innovations with College and Statewide Policy Development**

Over the course of Rounds 1, 2, and 4 colleges have implemented numerous instructional and student support innovations. Furthermore, colleges have tracked/evaluated progress and noted lessons learned related to these innovations. Missouri has an exciting, yet challenging opportunity to more widely share and use such information to support college and statewide higher education policy development. The recently formed Statewide task force (2016) to help build and coordinate State policy related to career pathways can serve as a foundation for future endeavors. In addition, efforts to connect lessons learned from MoWINs innovations to MCCA's strategic plan is a step in the right direction. Grant leadership notes progress made in these areas: common core curriculum in the Community Health Care Worker program; credit for prior learning for returning veterans; US Department of Agriculture (USDA) Missouri Skills to Success program for Supplemental Nutrition Assistance Program (SNAP) recipients.

## **Additional TPE Required Data Collection and Sharing**

The consortium should continue to work with its member colleges to secure and produce a unit-record file for the non-grant, comparison cohort. Construction of this file should be based upon the participant, and academic and UI employment/wage outcome data outlined by the TPE. This file is a key ingredient of the DOL-approved evaluation plan. Once this task is completed, a de-identified data file should be shared with the TPE for review and analysis.

In addition, the consortium should finalize its efforts to continually update grant participant, unit-record UI employment and wage data and merge these data into the ETO data collection system. Once this task is completed the consortium should share the TPE-required unit record file with Cosgrove & Associates for review, approval and analysis.

## **Conclusion**

Cosgrove & Associates' analysis of available data reveals the MoSTEMWINs consortium and its member colleges have engagement with employers and community based organizations to develop and redesign programs of study. Such program development and redesigned efforts are connected to industry identified and recognized program structures, competencies and credentials/awards. Furthermore, consortium member colleges are implementing programs of study and grant strategies with fidelity, and making appropriate implementation progress.

Grant enrollment and program completion data reveal the consortium is on schedule to meet expected grant performance targets for these areas. As of this mid-point evaluation, C&A cannot reach a conclusion regarding grant progress associated with employment wage increases, as UI employment and wage data at the unit level have not yet been provided to the TPE. The delay in providing the TPE with UI and wage data is a result of the State's DWD request for a modification to the consortium-DWD data sharing agreement to include a cyber security liability clause. Consortium leadership has now informed the TPE that they have resolved this issue and such a clause is in place. The consortium has advised the TPE they will begin to update the participant file with UI and wage data and able to provide unit-record UI and wage data to the TPE by June 30, 2017.

Finally, it is the opinion of C&A that partner colleges and the consortium are documenting and using lessons learned to improve grant performance and overall grant management. In addition, colleges and the consortium are sharing such information to support both campus-based and statewide scaling and sustainability of successful grant innovations.

Cosgrove & Associates looks forward to partnering with the consortium and its partner colleges to further evaluate grant outcomes and impact, and examine the extent to which program and strategy implementation affects grant outcomes and impact.

## Crowder College

Crowder College's vision for MSW as stated in their logic model is to grow their transportation training program; to produce a safer and more responsible work force while meeting industry needs; and secure employment for participants.

Crowder's MSW goal aligns with the three priorities of MSW, namely, to accelerate entry, create clear pathways to STEM, and improve employment attainment. The College is meeting their goal and MSW priorities through the Truck Driving program. The College's efforts to accelerate students through their MSW program of study is focused on the program director, faculty, and navigator who serve as advisors for students. Crowder introduced a navigator to work with students on study skills, personal time management, social skills, and barriers they might be facing. Although the program of study is short-term (4-5 weeks), it is intense with full-days of instruction. As this is a technical (truck-driving) program, low-skilled students are accepted into the program and faculty monitor students' progress and provide additional assistance as needed. Due to the entry-level nature of the curriculum, the program structure, and the life experiences of the students, Crowder's MSW navigator has taken on a different role than in previous TAACCCT rounds. The MSW navigator focuses more on career readiness and understanding of the life-style in the transportation industry.

Crowder prides itself on its responsiveness to industry needs and developed a training manual to cover the soft-skills that employers wanted to see in program completers. Crowder has developed strong partnerships with transportation partners and has several employers who pay tuition and guarantee jobs to students who successfully complete Crowder's program. One partner has even agreed to guarantee eight seats in each session regardless of the number of students they have in the program.

Based upon data provided by MCCA, as of January 20, 2017, approximately 48% of Crowder College's 200 participants have completed their full program of study as shown in Figure 2. (*MCCA provided updated summary data to the College on January 30, 2017 showing that 199 participants had completed their program of study*).

Crowder College is implementing strategies and activities in accordance with its designated work plan and logic model. The College's major accomplishment is employer engagement and its major challenge has been incorporating innovations into existing organizational processes and systems. As it implements MSW, College Crowder is learning about new ways to help students navigate from recruitment to intake through their program of study to completion and employment. On a broader level, Crowder College is learning of the need to more fully integrate

### Truck Driving

Figure 1. Crowder College MSW program of study.

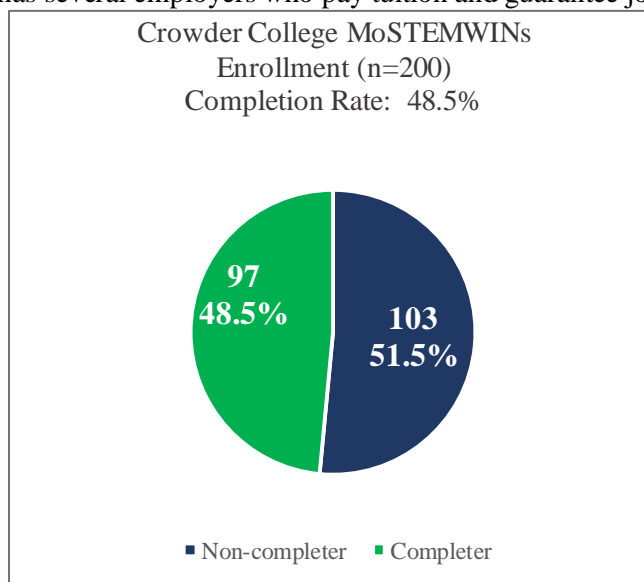


Figure 2. Crowder College MSW enrollment and completion.

future grant acquisition into its strategic planning process so the strategic planning process guides the pursuit of future grant opportunities.

Figure 3-below depicts Crowder College’s self-assessment of implementation of MSW priorities and strategies using this scale:

- Rating of 0 = Not Planned: this activity is not relevant to this college's MSW grant.
- Rating of 1 = Planning but Not Started: this activity is being planned as part of the grant but implementation has not begun.
- Rating of 2 = Advancing Implementation: implementation is occurring on an on-going basis; however, changes or advancements will continue during the grant.
- Rating of 3 = Mature Implementation: implementation has reached the highest level and no additional changes or modifications are expected during the grant.
- Rating of 4 = Sustaining Implementation: the college has made a formal, tangible commitment of resources (budget, people, facilities) to continue this activity beyond the grant.

Table 1 below presents the summary comments of the third-party evaluator subsequent to an interim site visit document review. Table 2 presents the College’s self-assessment of stakeholder engagement in the MoSTEMWINs grant.



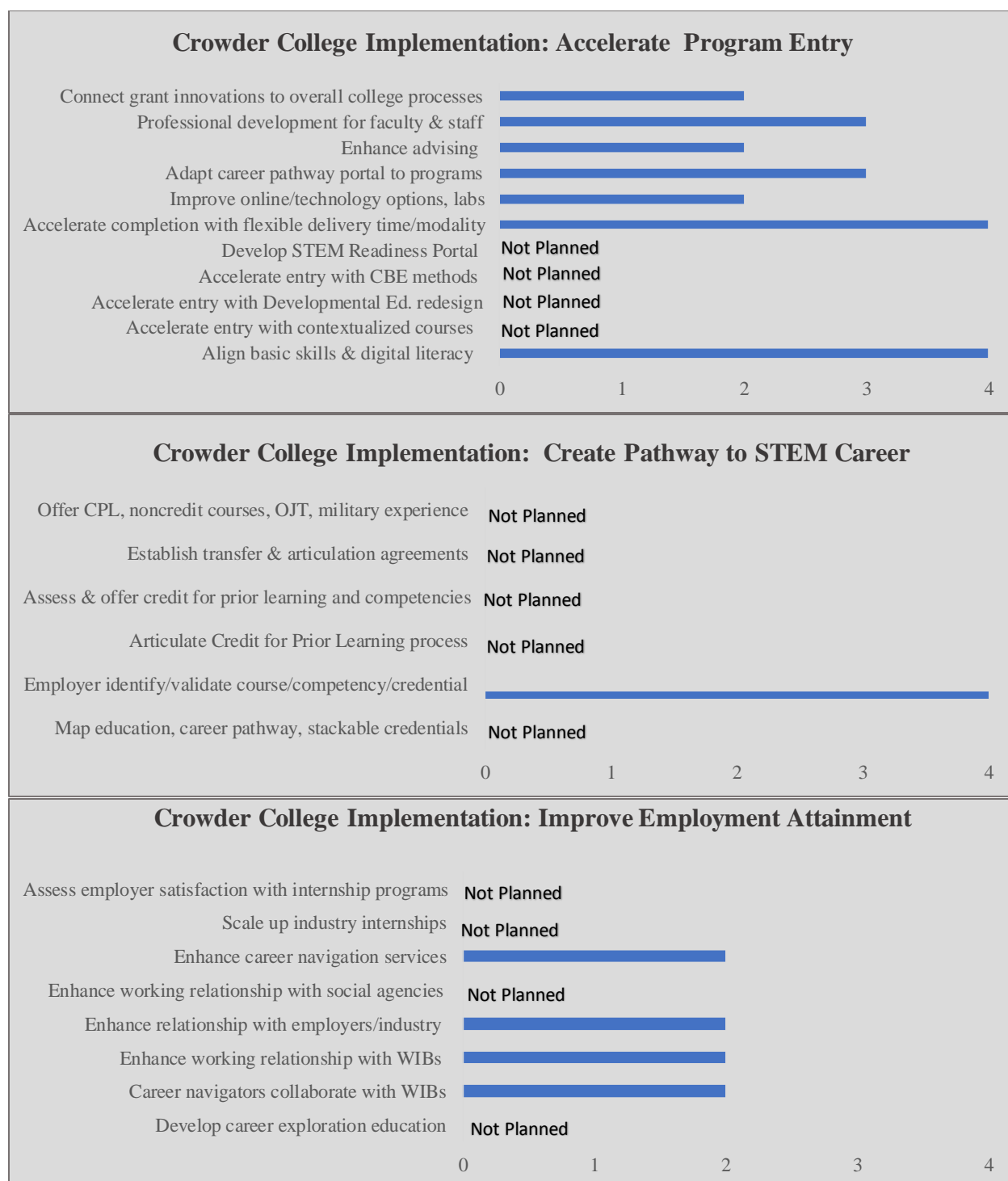


Figure 3. Crowder College self-assessment of implementation.

**Table 1. Crowder College's MoSTEMWINS Accomplishments, Challenges, & Learning**

<b>Accomplishments</b>	Grant program is in place and moving toward full maturity.
	Grant program and strategies are being implemented in a manner consistent with the college's logic model.
	The College and the local career center have a positive relationship.
	Employer engagement is strong with a key employer partner working with the college to continuously improve the program. Employer engagement includes recruitment, curriculum development, and employment opportunities.
	College has embedded soft-skills into the curriculum and students report satisfaction with the inclusion of such skills.
	Professional licensure certification is embedded in the program of study.
	Student to faculty engagement is strong and students report a high degree of satisfaction with instruction and faculty assistance and support.
<b>Challenges</b>	Innovations related to CBE, non-term based instruction, and credit for prior learning continue to challenge existing organizational processes and systems.
	The college faces the challenge of integrating innovations into the strategic planning process.
	The college recognized the need for increased space if the truck driving program is to sustain at current level or grow.
<b>Learning</b>	Employer engagement although strong requires continuous attention.
	The College is learning of the need to more fully integrate future grant acquisition into its strategic planning process so the strategic planning process guides the pursuit of future grant opportunities.

**Table 2. Crowder College MoSTEMWINs Stakeholder Engagement**

<b>Crowder College MoSTEMWINs Stakeholder Engagement</b>								
<b>Roles &amp; Responsibilities</b>	<b>College Leaders</b>	<b>MoWINs Project Leaders</b>	<b>Faculty</b>	<b>Student Support Staff</b>	<b>Students</b>	<b>Employers</b>	<b>Workforce Investment Board</b>	<b>Other Ed. Partners</b>
Assist with Program Design	High	Moderate	High	Low	Low	High	High	N/A
Connect Graduates to Employment	N/A	Low	High	Low	Moderate	High	Moderate	Low
Identify Industry Workforce Needs	High	High	High	Moderate	Moderate	High	High	Moderate
Identify Necessary Skills and Competencies	Moderate	Moderate	High	Moderate	High	High	Moderate	Moderate
Identify, Access, and/or Refer Participants	N/A	N/A	Moderate	Moderate	High	High	High	Low
Analyze and Interpret Student Outcome Data	Moderate	High	High	High	Moderate	High	Moderate	N/A
Validate Curriculum	High	Low	High	Low	High	High	Low	Low
Provide Support Services	High	High	High	Low	N/A	Moderate	High	N/A
Participate in Curriculum Development	High	Low	High	Low	Low	High	Low	N/A
Provide Financial Support	High	High	N/A	N/A	N/A	High	High	N/A
Provide Intern/Externships or Other Work-Based Learning Activity	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Working to Sustain or Scale Innovations beyond the Grant Period	High	High	High	Low	N/A	N/A	N/A	N/A

## East Central College

East Central College's (ECC) vision for MSW as stated in their logic model is to offer industry-recognized certifications; to offer non-credit to credit pathways; and to integrate non-credit courses within the credit framework.

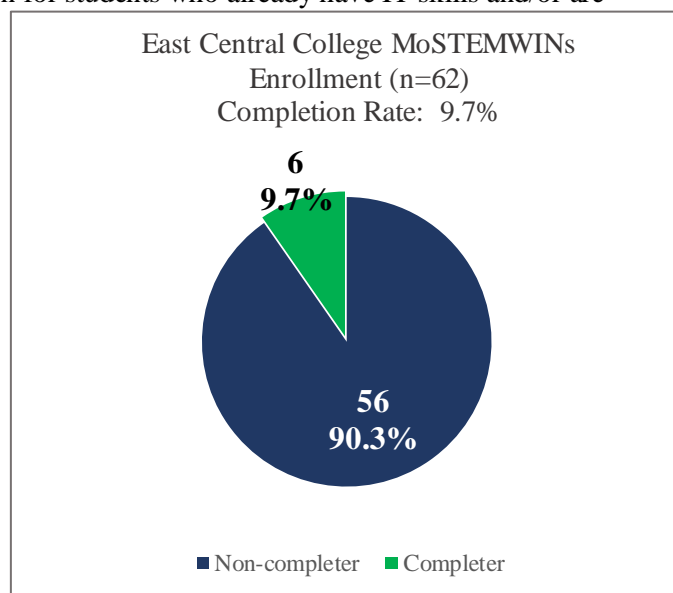
East Central's MSW vision aligns with the three priorities of MSW, namely, to accelerate entry, create clear pathways to STEM, and improve employment attainment. The College is meeting their goal and MSW priorities through a non-credit Computer Information Systems program through its MSW grant. The program leads to an ECC CIS Certificate and is built using the following stackable credentials: CompTIA, Cisco, and a series of Microsoft Certifications. East Central defines a program completer as any participant who completed one or more of the stackable credentials. The program allows for self-paced instruction with the option for a student to use an on-line "test-out" process to move through the stackable credentials & modules at an accelerated rate.

### Computer Information Systems Certifications

*Figure 1. East Central College MSW program of study.*

The program is designed to provide instruction for students who already have IT skills and/or are employed in a position in which they are doing IT work, but may not have appropriate IT certification/training. The credit-based CIS department assisted with the design of this program. The intent was to embed stackable certifications into their CIS degree programs. In addition, CIS credit faculty partnered with grant staff to align and connect non-credit CIS courses to standard CIS credit courses. This alignment and connection of non-credit to credit instruction is a significant accomplishment.

Student support services and advising will primarily be the grant program director, program coordinator, and a full-time faculty member. Such efforts are currently aimed at student recruitment, retention, certificate/program completion and employer engagement.



*Figure 2. East Central College MSW enrollment and completion.*

Based upon data provided by MCCA, as of January 20, 2017, approximately 10% of East Central's 62 participants have completed their full program of study as shown in Figure 2.

Figure 3 below depicts East Central College's self-assessment of implementation of MSW priorities and strategies using this scale:

- Rating of 0 = Not Planned: this activity is not relevant to this college's MSW grant.
- Rating of 1 = Planning but Not Started: this activity is being planned as part of the grant but implementation has not begun.

- Rating of 2 = Advancing Implementation: implementation is occurring on an on-going basis; however, changes or advancements will continue during the grant.
- Rating of 3 = Mature Implementation: implementation has reached the highest level and no additional changes or modifications are expected during the grant.
- Rating of 4 = Sustaining Implementation: the college has made a formal, tangible commitment of resources (budget, people, facilities) to continue this activity beyond the grant.

Table 1 below presents the summary comments of the third-party evaluator subsequent to an interim site visit document review. Table 2 presents the College's self-assessment of stakeholder engagement in the MoSTEMWINs grant.

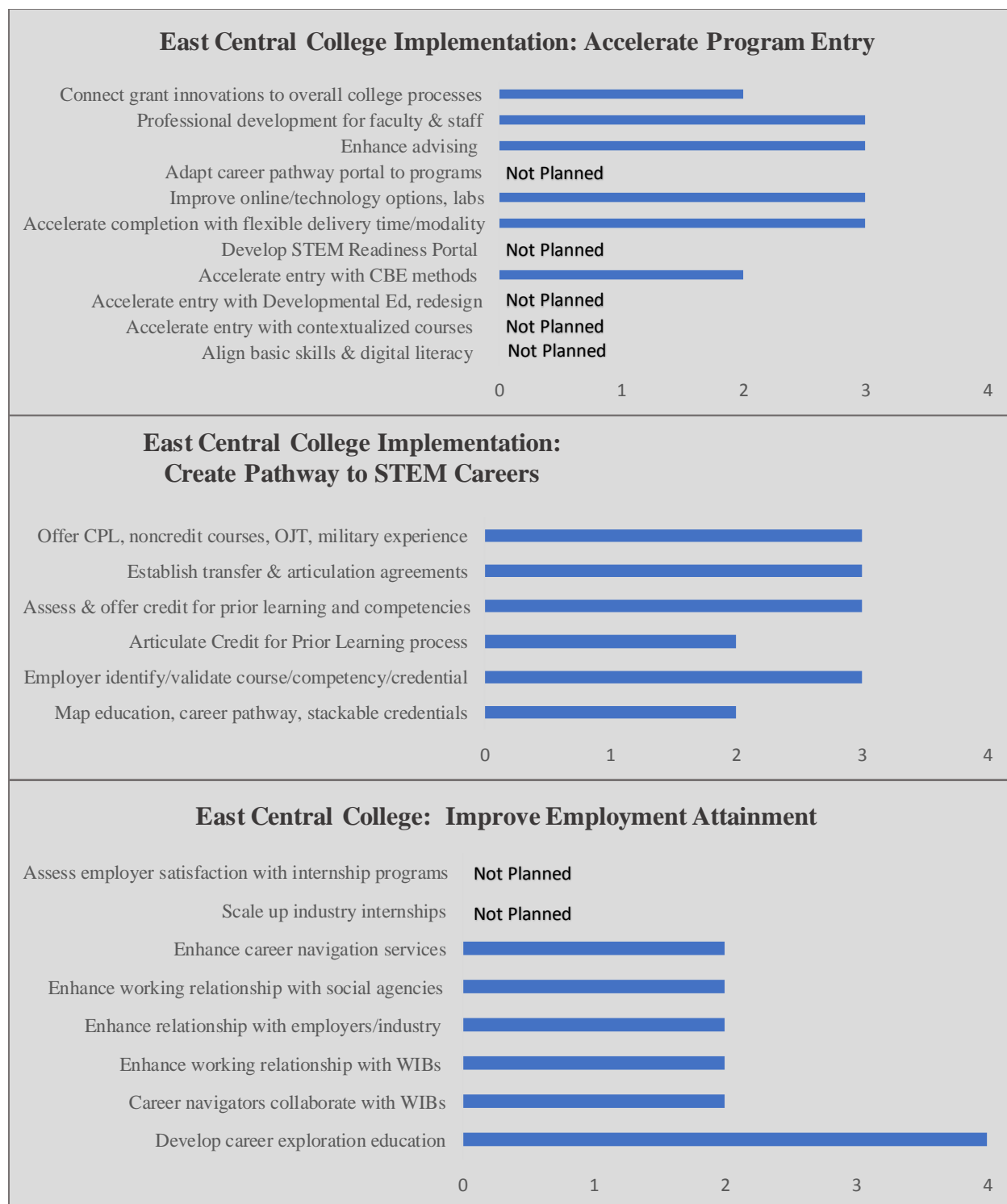


Figure 3. East Central College self-assessment of implementation.

**Table 1. East Central College's MoSTEMWINs Accomplishments, Challenges, & Learning**

<b>Accomplishments</b>	Grant program and strategies have been implemented and are reaching full maturity.
	Grant program and strategies have been implemented in a manner consistent with the College's logic model.
	The College and the local career center have a positive relationship.
	Grant is helping the College expand into Phelps County.
	Grant is helping the College increase its efforts to build bridges between non-credit and credit programs.
	Grant is helping the College explore and move toward competency-based education, including strategies associated with: self-paced student progression; open-entry and open-exit; and greater use of non-term based instructional modalities.
	Students see the value of embedding professional certifications and licensures in the program curriculum.
<b>Challenges</b>	Current organizational processes and practices will require modifications to support new instructional approaches related to: CBE; self-paced; non-term based, open-exit and open-entry; non-credit to credit bridges; and credit for prior learning strategies.
	Efforts to more fully integrate and connect instruction and student support functions may require modifying organizational structures, and will certainly require additional faculty and staff development.
	The need to direct specific efforts to ensure that faculty and staff currently working on innovations continue to have a voice in future program/strategy developments.
<b>Learning</b>	The College is exploring new strategies related to accelerated and self-paced instruction and working to determine if such strategies truly lead to accelerated completion.
	Innovation requires continuous faculty and staff development
	Modified instructional strategies related to self-paced and accelerated curriculum require new student and advising support services.

**Table 2. East Central College MoSTEMWINS Stakeholder Engagement**

East Central College MoSTEMWINS Stakeholder Engagement								
Roles & Responsibilities	College Leaders	MoWINS Project Leaders	Faculty	Student Support Staff	Students	Employers	Workforce Investment Board	Other Ed. Partners
Assist with Program Design	High	High	High	N/A	N/A	High	Low	Low
Connect Graduates to Employment	Low	High	High	Moderate	Low	Moderate	Low	Low
Identify Industry Workforce Needs	High	High	High	Low	Moderate	High	Moderate	High
Identify Necessary Skills and Competencies	Low	High	High	Low	Moderate	High	Low	Moderate
Identify, Access, and/or Refer Participants	Low	High	Moderate	Moderate	Moderate	High	Moderate	Moderate
Analyze and Interpret Student Outcome Data	Moderate	High	High	Moderate	N/A	N/A	N/A	High
Validate Curriculum	Moderate	Moderate	High	N/A	Moderate	Moderate	Low	Moderate
Provide Support Services	Low	High	High	High	N/A	Moderate	Moderate	N/A
Participate in Curriculum Development	N/A	Low	High	N/A	N/A	Moderate	N/A	Low
Provide Financial Support	Low	Moderate	Moderate	N/A	Low	High	Moderate	N/A
Provide Intern, Externships, Other Work-Based Learning Activity	N/A	High	High	N/A	Low	High	Low	N/A
Work to Sustain or Scale Innovations beyond Grant	High	Moderate	Moderate	Low	N/A	Moderate	Low	High



## Jefferson College

Jefferson College's vision for MSW as stated in their logic model is to: develop best practices for student support based on an improved advising protocol and enhanced tutoring services; offer CBE as a third delivery model; and redefine Anatomy and Physiology education at the 2-year institution to improve in-course persistence and academic success for A&P students in subsequent courses.

Jefferson's MSW goal aligns with the three priorities of MSW, namely, to accelerate entry, create clear pathways to STEM, and improve employment attainment. The College is meeting their goal and MSW priorities through instructional programming, enhanced student support, and tutoring services. The college is offering an Electronic Technology certificate (ETC) program. This program leads to a credit-bearing certificate which is connected to the college's Electronics Technology, and Biomedical Electronics Technician degree programs. With embedded certifications and accelerated coursework, the ETC demonstrates lessons learned from the CIS program from MHW. Credit for Prior Learning will be applicable for ETC students.

- **Electronics Technology Certificate**
- **Health Professions Tutoring & Resource Lab**
- **Personal Resource and Education Plan**

Figure 1. Jefferson College MSW programs of study.

Jefferson College is also providing intentional student advising support through its MoSTEMWINs Portal and PREP (the Personal Resource and Education Plan). The Portal program leads to the NCRC and allows students in pre-allied health to accelerate progress into and increase success in allied health courses/programs via the Health Professions Tutoring and Resource Lab (HPTRL). Specifically, the lab helps improve student performance in Anatomy and Physiology 1 & 2. Jefferson is incorporating the use of learning analytics to help identify those students with low probability of success for both the ETC and HPTRL programs.

Based upon data provided by MCCA, as of January 20, 2017, approximately 12% of Jefferson College's 132 participants have completed their full program of study as shown in Figure 2. (MCCA provided updated summary data to the College on January 30, 2017 showing 141 participants and 36 program completers.)

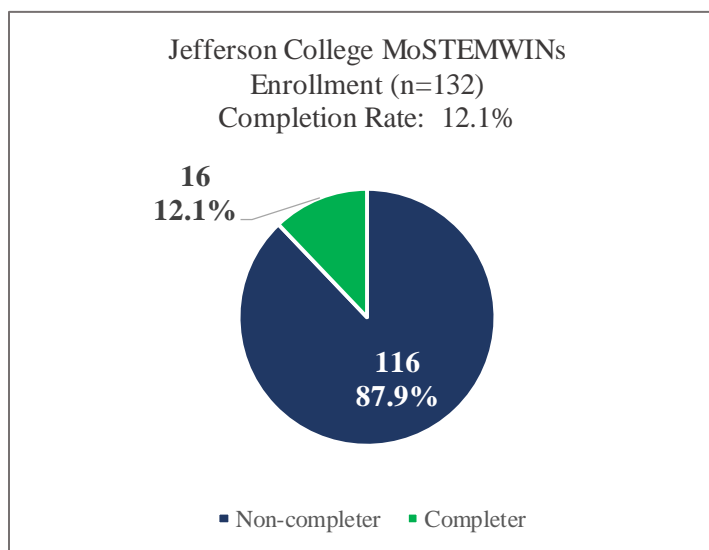


Figure 2. Jefferson College MSW enrollment and completion.

MSW grant students are supported by two Navigators (one for healthcare and one for technology). Navigators are working with faculty to identify student loss/momentum points and better understand/predict when students may struggle with program content. By using data and learning analytics, navigators are partnering with the faculty to provide a more intentional approach to student advising, including the use of designated intervention strategies at key points in the student's experience.

To further support the navigator and faculty team concept, navigators are embedded into the program structure and have direct access to data to support student success.

Figure 3-below depicts Jefferson College’s self-assessment of implementation of MSW priorities and strategies using this scale:

- Rating of 0 = Not Planned: this activity is not relevant to this college's MSW grant.
- Rating of 1 = Planning but Not Started: this activity is being planned as part of the grant but implementation has not begun.
- Rating of 2 = Advancing Implementation: implementation is occurring on an on-going basis; however, changes or advancements will continue during the grant.
- Rating of 3 = Mature Implementation: implementation has reached the highest level and no additional changes or modifications are expected during the grant.
- Rating of 4 = Sustaining Implementation: the college has made a formal, tangible commitment of resources (budget, people, facilities) to continue this activity beyond the grant.

Table 1 below presents the summary comments of the third-party evaluator subsequent to an interim site visit document review. Table 2 presents the College’s self-assessment of stakeholder engagement in the MoSTEMWINs grant.

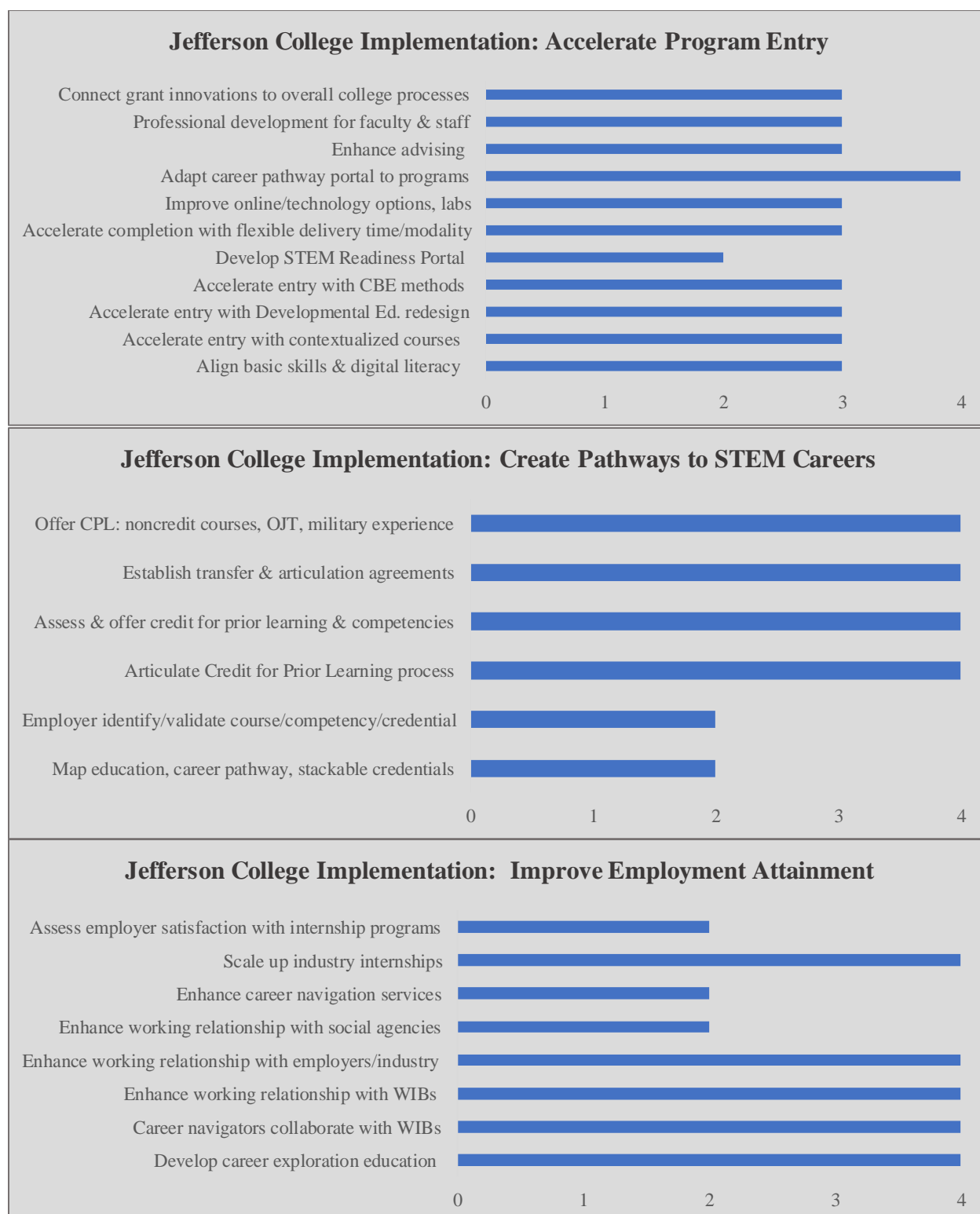


Figure 3. Jefferson College self-assessment of implementation.

**Table 1. Jefferson College's MoSTEMWINs Accomplishments, Challenges, & Learning**

Accomplishments	Grant program and strategies have been implemented and are reaching full maturity.
	Grant program and strategies are being implemented in a manner consistent with the College's logic model.
	The College and the local career center have a positive relationship.
	The College has built a strong relationship with local employer that covers a full spectrum from curriculum development, feedback, and instructional support (including internships), to hiring of program completers. The term "intrusive employer engagement" was used to describe this relationship.
	Employer interviewed is pleased with engagement of the college and pleased with program completers.
	Positive feedback from students regarding instructional design, curriculum, and student support services. Students appreciate the faculty and resources in the HPTRL lab and attribute it as a contributor to their success.
	Appropriate connection between faculty and student support staff exists, and both parties value this connection. This connection is working to expand the use of learning analytics to support early student intervention and intentional advising and support processes.
	Observed culture of organizational flexibility and adaptability with a willingness to experiment with innovations and use data to improve.
	Campus leadership is aware of grant programs/strategies and are supportive of efforts to connect grant innovations to mainstream organizational practices, processes, and policies. Such efforts include linking grant innovations to strategic planning and HLC quality improvement efforts. In addition, campus leadership noted the value of CBE-type instruction and recognizes that the need to connect instruction, student affairs, and related organizational functions as the campus continues to develop CBE-like strategies.
	Program curriculum includes soft-skills and career-specific learning strategies.
	Demonstrated learning from the experiences of MHW to MSW in terms of the programs and innovations offered.
Challenges	Current advisors/navigators are moving on to other positions.
	Fully connecting successful innovations to campus strategic planning efforts and processes.
	Innovations related to CBE, non-term based instruction, and credit for prior learning continue to challenge existing organizational processes and systems.
	The need to direct specific efforts to ensure that faculty and staff currently working on innovations continue to have a voice in future program/strategy developments.
Learning	Student support must be a continuous process that addresses the following stages: recruitment, orientation, student progress and retention, program completion, and employment.
	The importance of connecting student support functions and faculty instruction. Consideration is being given to locating advisors closer to classrooms and academic departments.
	Successful scaling of innovations requires connecting organizational functions associated with instruction and student support services.

**Table 2. Jefferson College MoSTEMWINS Stakeholder Engagement**

Jefferson College MoSTEMWINS Stakeholder Engagement								
Roles & Responsibilities	College Leaders	MoWINS Project Leaders	Faculty	Student Support Staff	Students	Employers	Workforce Investment Board	Other Ed. Partners
Assist with Program Design	Moderate	High	High	Moderate	N/A	Moderate	Moderate	N/A
Connect Graduates to Employment	N/A	Low	Moderate	Moderate	Low	High	High	N/A
Identify Industry Workforce Needs	High	High	High	Moderate	Low	High	High	N/A
Identify Necessary Skills and Competencies	Low	Moderate	High	High	Low	High	High	Moderate
Identify, Access, and/or Refer Participants	Low	Low	High	High	Low	Low	High	N/A
Analyze and Interpret Student Outcome Data	Moderate	High	High	Low	N/A	N/A	Moderate	N/A
Validate Curriculum	Moderate	Moderate	High	N/A	Moderate	High	Moderate	High
Provide Support Services	N/A	Moderate	High	High	Low	N/A	High	N/A
Participate in Curriculum Development	Low	Moderate	High	N/A	N/A	Moderate	Low	N/A
Provide Financial Support	High	High	N/A	Moderate	Moderate	N/A	High	N/A
Provide Intern/Externships or Other Work-Based Learning Activity	Low	Moderate	N/A	N/A	N/A	High	High	N/A
Working to Sustain or Scale Innovations beyond the Grant Period	High	High	High	Moderate	N/A	High	High	N/A

## Metropolitan Community College

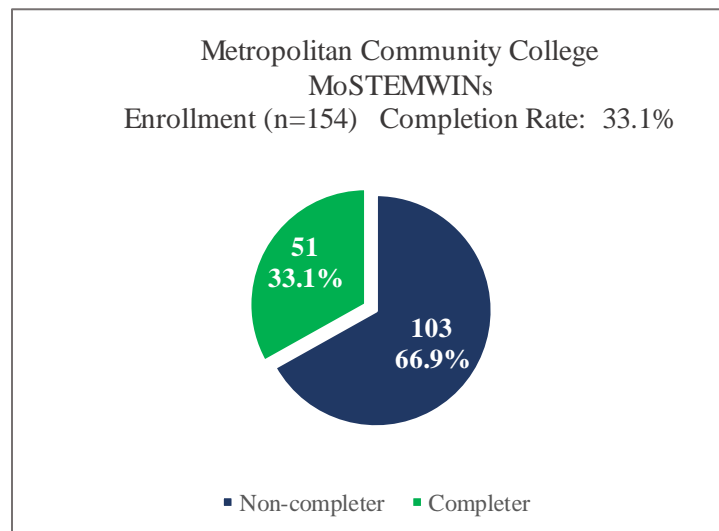
Metropolitan Community College's (MCC) vision for MSW as stated in their logic model is to provide a wider variety of learner options; to increase student engagement and program retention; increase student empowerment, and student drive for success; to sustain industry relevant programs; and to develop an efficient model for supplemental instruction. College efforts align with the three grant priorities with emphasis on accelerating program entry, creating clear pathways to STEM, and improving employment attainment. The College's MSW programs are listed in Figure 1.

- **Medical Assistant**
- **Computer Science Information Systems (CSIS) Supplemental Instruction Course—with certificate of completion awarded for attempting the CCENT exam**

*Figure 1. Metropolitan Community College MSW programs of study.*

Based upon data provided by MCCA, as of January 20, 2017, approximately 33% of Metropolitan's 154 participants have completed their full program of study as shown in Figure 2. (MCCA provided updated summary data to the colleges on January 30, 2017 showing that 63 participants had completed their program of study.)

The Medical Assistant program is offered as non-credit through a modularized, accelerated schedule. Program Completers are defined as those who complete the entire program of study and receive the MCC Certificate in Medical Assistant. Although this program is currently being offered as non-credit, MCC plans to explore approval for Title IV funding as a non-credit program and sees the potential to move the certificate to a credit program using Title IV funding.



*Figure 2. Metropolitan Community College MSW enrollment and completion.*

The CSIS SI program is connected to the college's existing CSIS credit program. Program completers are defined as students who complete the MCC CSIS Certificate program AND receive the CCENT certificate. Students are supported through the use of Supplemental Instruction. The CSIS Supplemental Instruction strategy is building upon lessons learned from the Round 1 instructional support strategy employed for Nursing students. Although not designed specifically for incumbent workers, the program is primarily serving students with prior work and/or information systems experience.

To increase student success in both the CSIS and Medical Assistant program, the grant Learning Specialist has directed additional attention to advising, retention, academic support and program completion.

Figure 3-below depicts Metropolitan Community College's self-assessment of implementation of MSW priorities and strategies using this scale:

- Rating of 0 = Not Planned: this activity is not relevant to this college's MSW grant.
- Rating of 1 = Planning but Not Started: this activity is being planned as part of the grant but implementation has not begun.
- Rating of 2 = Advancing Implementation: implementation is occurring on an on-going basis; however, changes or advancements will continue during the grant.
- Rating of 3 = Mature Implementation: implementation has reached the highest level and no additional changes or modifications are expected during the grant.
- Rating of 4 = Sustaining Implementation: the college has made a formal, tangible commitment of resources (budget, people, facilities) to continue this activity beyond the grant.

Table 1 below presents the summary comments of the third-party evaluator subsequent to an interim site visit document review. Table 2 presents the College's self-assessment of stakeholder engagement in the MoSTEMWINs grant.

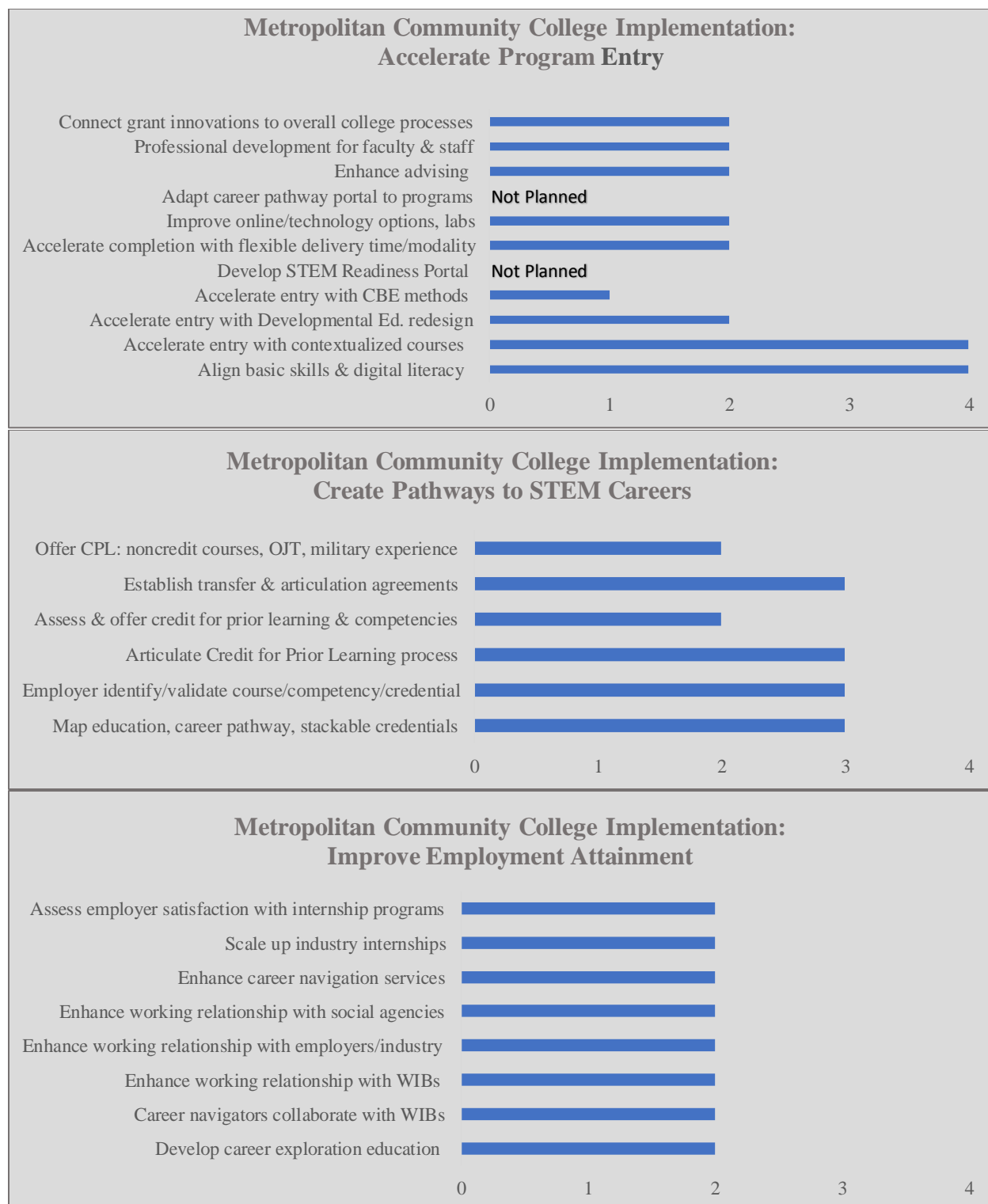


Figure 3. Metropolitan Community College self-assessment of implementation



**Table 1. Metropolitan Community College's MoSTEMWINs Accomplishments, Challenges, & Learning**

Accomplishments	Grant program and strategies have been implemented and are reaching full maturity.
	Grant program and strategies have been implemented in a manner consistent with the College's logic model.
	Employers pleased with the college's understanding of the new healthcare model and its impact on the MA role.
	Employers pleased with initial engagement of the college
	Employers pleased with the completers but would appreciate more knowledge of nomenclature and classroom lab experience would help the Medical Assistant students in their clinicals.
	Students appreciate the SI program and all its components, they had very specific recommendations to improve it: strongly recommend the IC&D workbook and CD; perhaps there is a time when the SI section could be scheduled to be more attractive; introduce Measure UP earlier in the semester.
	Students value the curriculum and job prospects of the program and appreciate the navigator's help and assistance.
	The college has worked out ETO and is able to pull reports.
	Partnership between the faculty member and navigator to help support student success.
	The metric and data on the SI students show that the college is paying attention to the data. The college may want to look at the ROI for these students for sustainability or scaling of the POS.
	Demonstrated learning from the experiences of MHW and MMW to MSW in terms of the programs and innovations offered.
	The College is beginning to explore changes to advising to determine how a more proactive approach might benefit students.
	Employers are willing to talk to college about partnering in the training but don't know with whom to have that conversation.
Challenges	Recognizing the role that MCC is playing in speaking on behalf of the colleges in the consortium
	As the College explores changes to its current advising model, heed the experience of grant advisors/learning specialist in the implementation of a new advising model and the design of metrics to evaluate student need.
	Employers are concerned about the college's commitment to the Medical Assistant program post grant, as they see the long-term term need for the program. Employers are willing to talk to college about partnering in the training but don't know with whom to have that conversation.
	Concerns were frequently mentioned regarding organizational silos, internal barriers and challenges to the scaling of successful grant innovations. The College may want to specify and explore such areas to determine if they are "real or perceived", and develop solutions where possible.
	If sustaining or scaling the supplemental instruction is a goal, it would be beneficial to look into its ROI.

	Students would like more hands on before they get to clinicals; students feel as though they are treated differently regarding lab access.
Learning	Students and faculty see value in advising being more fully connected to academic departments. Experiences from TAA grant navigators and advising holds the potential to assist the development of the College's STARFISH initiative.
	Students and employers see value in stackable credentials
	To more fully develop the Medical Assistant program, it may be beneficial to explore a full-time position with specific responsibilities for program development and management, and employer engagement.
	Improved student orientation and on-boarding of students into the MA program may be required to ensure that students understand the rigor and challenges of the program

**Table 2. Metropolitan Community College MoSTEMWINs Stakeholder Engagement**

Metropolitan Community College MoSTEMWINs Stakeholder Engagement								
<b>Roles &amp; Responsibilities</b>	<b>College Leaders</b>	<b>MoWINs Project Leaders</b>	<b>Faculty</b>	<b>Student Support Staff</b>	<b>Students</b>	<b>Employers</b>	<b>Workforce Investment Board</b>	<b>Other Ed. Partners</b>
Assist with Program Design	Low	High	High	High	Low	High	N/A	Moderate
Connect Graduates to Employment	N/A	High	Low	High	High	High	Moderate	Low
Identify Industry Workforce Needs	High	Moderate	Moderate	Moderate	Moderate	High	High	Moderate
Identify Necessary Skills and Competencies	Moderate	Moderate	Moderate	Moderate	Moderate	High	Low	Low
Identify, Access, and/or Refer Participants	Low	Low	Low	Moderate	Low	Low	High	Low
Analyze and Interpret Student Outcome Data	High	High	High	High	Low	N/A	N/A	N/A
Validate Curriculum	Moderate	High	High	Low	Low	High	Low	N/A
Provide Support Services	Low	High	High	High	N/A	Low	High	N/A
Participate in Curriculum Development	Moderate	Moderate	High	Moderate	Low	High	Moderate	N/A
Provide Financial Support	N/A	N/A	N/A	N/A	N/A	N/A	High	N/A
Provide Intern/Externships or Other Work-Based Learning Activity	N/A	Low	Moderate	Moderate	Moderate	High	Moderate	N/A
Working to Sustain or Scale Innovations beyond the Grant Period	High	High	High	High	N/A	High	N/A	N/A

## Mineral Area College

Mineral Area College's (MAC) vision for MSW as stated in their logic model is to use employer engagement to improve and develop short-term certificate programs that provide skills training which meet employer needs and elevated job opportunities for participants. A key component of this vision is the use of industry recognized stackable credentials to help short-term certificate programs lead to career pathways, as well as further education opportunities.

Mineral Area's MSW goal aligns with the three priorities of MSW, namely, to accelerate entry, create clear pathways to STEM, and improve employment attainment. The College is meeting their goal and MSW priorities through continuing programs initiated under previous MoWINs efforts and using employer feedback and MoWINs evaluation data to enhance these programs. The college's MSW programs are shown in Figure 1.

Under MSW, the Pharmacy Technician program has been shifted to the Business degree pathway due to employer feedback from the College's Round 1 TAACCCT grant. Course materials reflect this change along with other updates to the curriculum. In addition, the College has enhanced the curriculum to include the development of soft-skills to help ensure completers are "workplace" ready.

- **Certified Production Technician**
- **Certified Logistics Technician**
- **International Fluid Power Society Certifications:**
  - Industrial Hydraulic Mechanic
  - Pneumatic Technician
  - Conductor & Connector
  - Mobile Hydraulic Mechanic
- **Pharmacy Technician**

Figure 1. Mineral Area College MSW programs of study.

Grant students are supported by a full-time Navigator. The Navigator is charged with student recruitment and enrollment, advising and program support, and working with faculty to assist program completers in securing employment. By connecting the Navigator directly to the program area, the Navigator has been able to provide more comprehensive and intrusive student support services.

Based upon data provided by MCCA, as of January 20, 2017, approximately 36% of Mineral Area College's 106 participants have completed their full program of study as shown in Figure 2. (MCCA provided updated summary data to the colleges on January 30, 2017 showing 117 participants and 62 program completers.)

In addition to its programmatic efforts, Mineral Area is using MSW funds to re-design its developmental course offerings to build a bridge program for students with developmental education needs into specific college-ready program areas. The goal is to contextualize developmental education coursework to a program area and condense the time required to reach college-level readiness. The

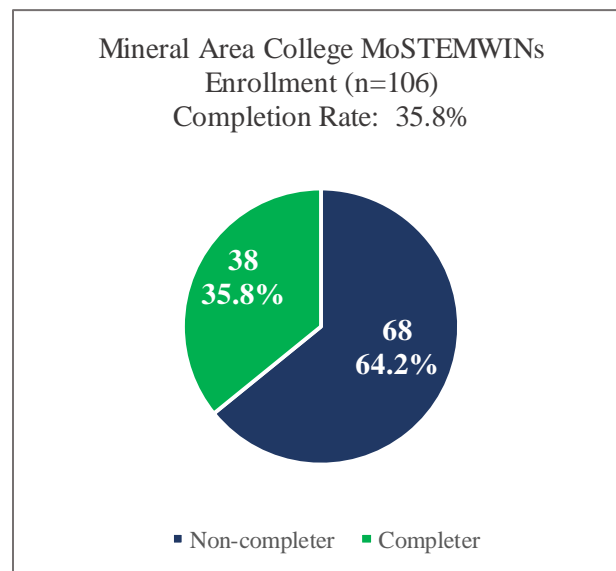


Figure 2. Mineral Area College MSW enrollment and completion.

bridge program includes academic content and skill development, as well as college orientation skills related to time management; study skills; college expectations; and career pathway guidance.

Figure 3 below depicts Mineral Area College's self-assessment of implementation of MSW priorities and strategies using this scale:

- Rating of 0 = Not Planned: this activity is not relevant to this college's MSW grant.
- Rating of 1 = Planning but Not Started: this activity is being planned as part of the grant but implementation has not begun.
- Rating of 2 = Advancing Implementation: implementation is occurring on an on-going basis; however, changes or advancements will continue during the grant.
- Rating of 3 = Mature Implementation: implementation has reached the highest level and no additional changes or modifications are expected during the grant.
- Rating of 4 = Sustaining Implementation: the college has made a formal, tangible commitment of resources (budget, people, facilities) to continue this activity beyond the grant.

Table 1 below presents the summary comments of the third-party evaluator subsequent to an interim site visit document review. Table 2 presents the College's self-assessment of stakeholder engagement in the MoSTEMWINs grant.

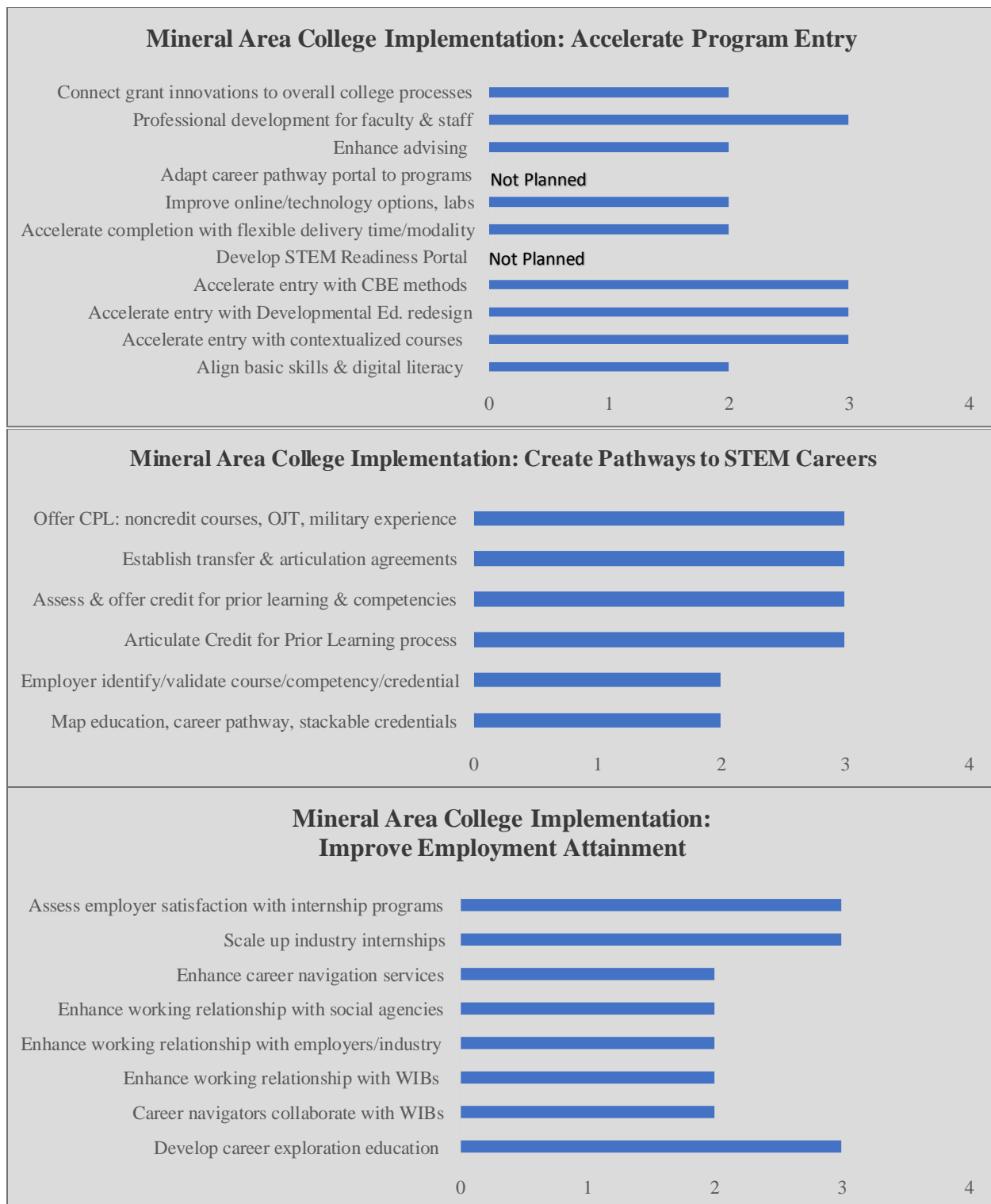


Figure 3. Mineral Area College self-assessment of implementation.

**Table 1. Mineral Area College's MoSTEMWINs Accomplishments, Challenges, & Learning**

<b>Accomplishments</b>	Grant program and strategies have been implemented and are reaching full maturity.
	Grant program and strategies have been implemented in a manner consistent with the College's logic model.
	Employers are pleased with the college's quality of completers.
	College is working to connect lessons learned from previous TAA grants to MoSTEM.
	College has used stackable credentials to create career pathways in Pharmacy Tech.
	Executive leadership supports grant innovations and experimentation
	Faculty are actively engaged with employers, including the development of effective employer advisory groups. In addition, faculty appear to work well as a team.
	Curriculum includes the development of soft-skills to help ensure completers are "workplace ready".
	Faculty are working closely with advisor/navigators to track student progress.
	Students report a high level of satisfaction with their programs, faculty, and student navigators.
	The development and inclusion of foundation coursework into a program's initial coursework.
	Grant administrator and senior leadership reported the desire to scale to other career and technical programs.
	Continued support for the expansion of Credit for Prior Learning.
<b>Challenges</b>	Lack of systematic internal process for sharing grant innovations and lessons learned with departments outside of the grant.
	Difficulty recruiting students into manufacturing technology programs. This problem seems to be growing now that the unemployment rate has dropped.
	Standard credit programs and faculty teaching in those programs are still locked into the 16-week instructional semester mode.
<b>Learning</b>	Connecting grant innovations to mainstream practices requires systematic attention.
	Accelerated programs and programs aimed at under-served target populations require increased intentional/intrusive support services to help ensure student success.
	Foundational skills programs which are embedded into the first two weeks of program course work, can help increase student success and save students from having to complete developmental coursework over a 16-week term.
	The MoWINs Consortium is a positive step for Missouri's community colleges and it should be leveraged to help increase sharing and learning across the State.

**Table 2. Mineral Area College MoSTEMWINs Stakeholder Engagement**

Mineral Area College MoSTEMWINs Stakeholder Engagement								
Roles & Responsibilities	College Leaders	MoWINs Project Leaders	Faculty	Student Support Staff	Students	Employers	Workforce Investment Board	Other Ed. Partners
Assist with Program Design	Low	Moderate	High	Moderate	Low	High	N/A	N/A
Connect Graduates to Employment	N/A	Moderate	High	High	N/A	High	Low	N/A
Identify Industry Workforce Needs	Low	High	High	High	Low	High	N/A	N/A
Identify Necessary Skills and Competencies	N/A	Moderate	High	Low	Low	High	N/A	N/A
Identify, Access, and/or Refer Participants	N/A	Low	Moderate	High	Moderate	High	Low	N/A
Analyze and Interpret Student Outcome Data	Low	Moderate	High	Moderate	N/A	Low	N/A	N/A
Validate Curriculum	N/A	Low	High	Low	Low	High	N/A	N/A
Provide Support Services	Low	High	Low	High	N/A	High	High	N/A
Participate in Curriculum Development	N/A	Low	High	Low	Low	High	N/A	N/A
Provide Financial Support	Moderate	High	Low	Moderate	N/A	High	High	N/A
Provide Intern/Externships or Other Work-Based Learning Activity	N/A	Low	High	High	N/A	High	N/A	N/A
Working to Sustain or Scale Innovations beyond the Grant Period	Moderate	Moderate	Moderate	Moderate	N/A	Low	Low	N/A



## Moberly Area Community College

Moberly Area Community College's (MACC) vision for MSW as stated in their logic model is to offer the highly skilled training requested by northeast Missouri manufacturers in a flexible hybrid format. Courses are designed to be offered online and the labs provided through a mobile lab at each of the MACC centers. Courses will eventually be moved to a CBE format paving the way for more programs to be offered at MACC in this manner.

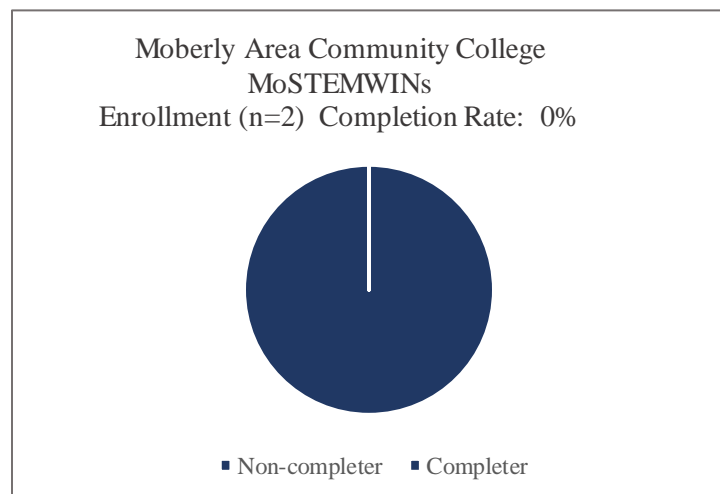
Moberly has focused on creating clear pathways to STEM careers and improving employment attainment and the college is accomplishing this through the Mechatronics program which includes the CPT certificate. The program is a credit program and a completer is defined as a participant who completes the entire Mechatronics set of courses, including all four sections of the CPT certifications.



*Figure 1. Moberly Area Community College MSW program of study.*

The college engaged employers to customize the Mechatronics program and to define the stackable credentials and competencies associated with the various modules contained within the program. Employers were especially interested in hiring program completers with competencies in technical areas associated with manufacturing technology (electronics, mechanics, pneumatics, etc.). In addition to serving students in the immediate MACC service area, the program is finalizing its strategy to use a mobile lab to assess and support employer training needs in more remote counties of the MACC service area, as well as offering hybrid instruction through the MACC lab located in Columbia, Missouri.

The College's efforts to accelerate entry into career programs center around efforts to increase advisor-to-student engagement. MACC has advisors at every location who assist with enrolling MSW CPT/Mechatronics students and the MSW primary navigator is located at the Columbia location and is directly connected to program faculty and students. The MSW strategy to embed the program advisor in the Mechatronics program has been well received by students and is supporting college efforts to increase advisor-to-student engagement. As a result, the college is exploring if the MSW navigator approach and the embedding of advisors in the academic program area might be spread throughout the college.



*Figure 2. Moberly Area Community College MSW enrollment and completion.*

Based on data provided by MCCA as of January 20, 2017, Moberly has enrolled two participants neither of whom have completed their full Mechatronics program as shown in Figure 2.

Throughout its efforts to implement TAACCCT priorities, the College has made strides but has continued to be challenged by internal policies and procedures that hamper innovation. College leadership has expressed support for tying grant innovations to strategic planning and learning from the MSW experience, yet the College would be well-served by creating systematic ties from the grant to the college.

Figure 3-below depicts Moberly Area Community College's self-assessment of implementation of MSW priorities and strategies using this scale:

- Rating of 0 = Not Planned: this activity is not relevant to this college's MSW grant.
- Rating of 1 = Planning but Not Started: this activity is being planned as part of the grant but implementation has not begun.
- Rating of 2 = Advancing Implementation: implementation is occurring on an on-going basis; however, changes or advancements will continue during the grant.
- Rating of 3 = Mature Implementation: implementation has reached the highest level and no additional changes or modifications are expected during the grant.
- Rating of 4 = Sustaining Implementation: the college has made a formal, tangible commitment of resources (budget, people, facilities) to continue this activity beyond the grant.

Table 1 below presents the summary comments of the third-party evaluator subsequent to an interim site visit document review. Table 2 presents the College's self-assessment of stakeholder engagement in the MoSTEMWINs grant.

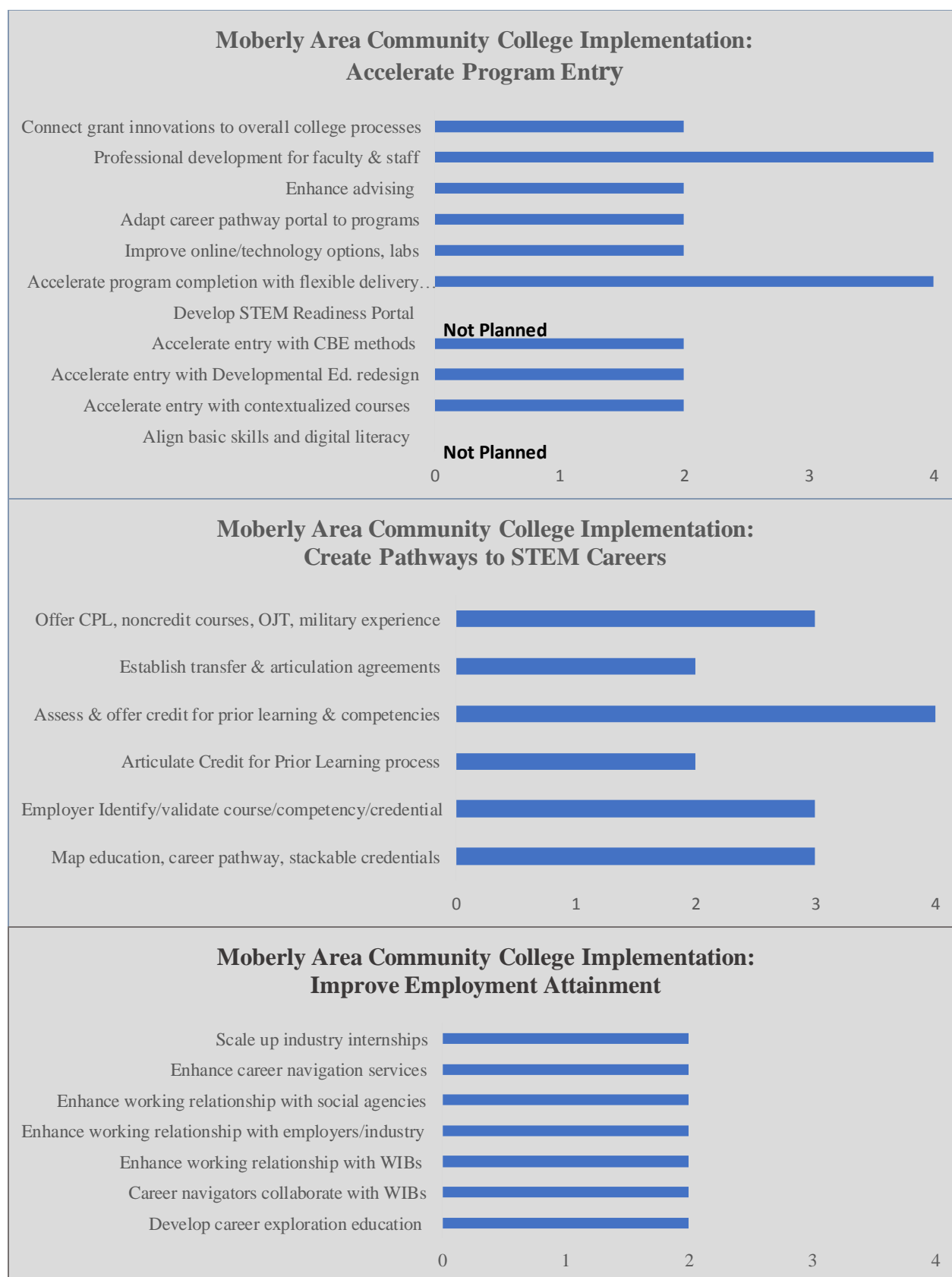


Figure 3. Moberly Area Community College self-assessment of implementation.

**Table 1. Moberly Area Community College's MoSTEMWINs Accomplishments, Challenges, & Learning**

<b>Accomplishments</b>	Grant program and strategies have been implemented and are reaching full maturity.
	Grant program and strategies have been implemented in a manner consistent with the College's logic model.
	Strong employer engagement/partnership. Employer feels connected to the program and expressed "ownership" of the program. College is also working to develop and expand community/economic development partnerships.
	Employer pleased with the adaptability of the college in meeting employer needs. Positive employer engagement creating a strong and effective program advisory committee.
	Strong connection between program (faculty and navigator) and area high school counselors.
	Program curriculum includes soft-skills and career-specific learning strategies.
	Observed organizational adaptability and a willingness to experiment with innovations. Leadership expressed a desire to more fully link grant program to a manufacturing technology career pathway concept including a college orientation course customized for manufacturing students.
	Program is likely to sustain post grant and has support of President, Vice-President of Instruction, faculty, staff, as well as strong demand from employers, and students.
	Leadership is seeking to learn from grant experimentations and acknowledge the value and lessons learned from the College's Round 1 TAACCCT grant. Leadership specifically mentioned C4PL, CBE and use of intrusive/intentional advising that is program-specific.
	Program faculty and Grant Coordinator (also serves as Navigator) have a strong working relationship.
	Strong faculty engagement in the development of curriculum and instructional strategies.
	Demonstrated value of faculty development related to curriculum development and changes.
	Students value the program and recognize the connection between program completion, immediate employment, and a career pathway.
	Increasing connection between grant program/courses and existing engineering technology programs/courses.
	Strong curriculum connection between lab-based, skills education, and course lectures.
<b>Challenges</b>	Key faculty member is currently working at maximum level.
	Grant Coordinator is splitting time/responsibility among grant management, faculty support and student support/navigation roles. With the large increase in program enrollment, this may become problematic.
	Skill based education and lab instruction requires a low student to equipment ratio.
	The College continues to be challenged by internal policies and procedures that slow innovation. College leadership has expressed support for tying grant innovations to strategic planning and learning from the MSW experience. Yet the College would be well-served by creating systematic ties from the grant to the college.
<b>Learning</b>	The value of connecting faculty and student support staff both in and out of the classroom.
	Intrusive/intentional student support which is program-specific holds promise. The college is exploring how best provide such support in a cost-effective model.
	Engagement/partnership with high school counselors requires specific and continuous attention.
	Effective skill based education and lab instruction requires a low student to equipment ratio.
	Recognizing the value employers place on "soft-skills" the college is learning how to best embed such skill development into existing courses, rather than add additional courses to an already full program curriculum.

**Table 2. Moberly Area Community College MoSTEMWINs Stakeholder Engagement**

Moberly Area Community College MoSTEMWINs Stakeholder Engagement								
<b>Roles &amp; Responsibilities</b>	<b>College Leaders</b>	<b>MoWINs Project Leaders</b>	<b>Faculty</b>	<b>Student Support Staff</b>	<b>Students</b>	<b>Employers</b>	<b>Workforce Investment Board</b>	<b>Other Ed. Partners</b>
Assist with Program Design	High	High	High	Moderate	N/A	Moderate	N/A	N/A
Connect Graduates to Employment	Moderate	Moderate	Moderate	Moderate	N/A	Moderate	Low	N/A
Identify Industry Workforce Needs	Moderate	Moderate	High	Moderate	N/A	Moderate	Moderate	Low
Identify Necessary Skills and Competencies	High	Low	High	Low	N/A	Moderate	Low	N/A
Identify, Access, and/or Refer Participants	High	High	Moderate	Moderate	Low	Moderate	Moderate	N/A
Analyze and Interpret Student Outcome Data	High	High	Moderate	High	N/A	N/A	N/A	
Validate Curriculum	High	Low	High	Low	N/A	Moderate	N/A	N/A
Provide Support Services	Moderate	High	Moderate	High	N/A	Low	Moderate	N/A
Participate in Curriculum Development	Moderate	Moderate	High	Low	N/A	Low	N/A	N/A
Provide Financial Support	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Provide Intern/Externships or Other Work-Based Learning Activity	Low	Moderate	Low	Moderate	N/A	Low	N/A	N/A
Working to Sustain or Scale Innovations beyond the Grant Period	Moderate	High	High	High	N/A	Low	N/A	N/A

## North Central Missouri College

North Central Missouri College's (NCMC) vision for MSW as stated in their logic model is to improve student success measured by an increase in college-level math completers, higher overall certificate/degree completion, and higher number of students transferring on to a four-year university. In addition, the College desires that more employers utilize and value industry credentials because of aligned CPT curriculum.

North Central's MSW goal aligns with the three priorities of MSW, namely, to accelerate entry, create clear pathways to STEM, and improve employment attainment. The College is meeting their goal and MSW priorities through the enhanced Certified Production Technology program and the UP program. The UP program is designed to accelerate students who have placed into developmental math courses into their program of study.

The UP program is North Central's major effort to accelerate students by decreasing their time spent in developmental math as students are on-boarded and transitioned to college-level programs more quickly and effectively. The program consists of four parts: Brush-Up, Team-Up, Skill-Up, and tutoring. A navigator supports students throughout their math courses from recruitment to transition to college-level courses. Due to the success of the UP program (pass rates of 67% to 75% in Fall 2016), the College is planning to scale the co-requisite courses throughout the Math department and work to duplicate the model with English courses.

- **Certified Production Technician (credit)**
- **UP-Developmental Math**

Figure 1. North Central Missouri College MSW programs of study.

Based upon data provided by MCCA as of January 2017, approximately 56% of North Central's 71 participants have completed their full program of study as shown in Figure 2. (MCCA provided updated summary data to the colleges on January 30, 2017 showing 92 participants and 32 program completers.)

The CPT MSW program demonstrates North Central's pathway to STEM careers as well as the College's engagement of employer partners and industry. CPT is a credit program built upon the college's existing CPT Program and enhanced with curriculum adjustments/additions based on employer input. Specific components include: supplemental online resources, content specific to employer needs, flexible course scheduling, and customized delivery methods. Program completers are defined as students who completed each of the following MSSC credentials: Safety; Quality Practices & Measurement; Manufacturing Processes & Production; Maintenance Awareness; OHSA 10; and the NCRC. The CPT program and embedded stackable credentials allow students to earn multiple credentials that lead to AAS degrees at NCMC.

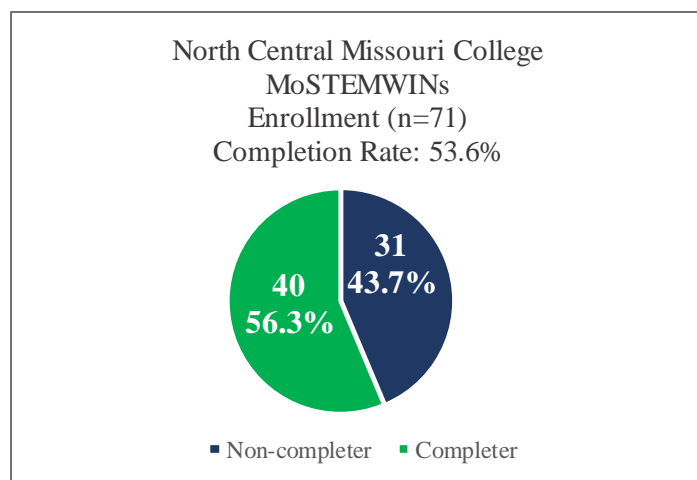


Figure 2. North Central Missouri College MSW enrollment and completion.

North Central provides UP and CPT students with individualized assistance to help ensure student success through academic advising, course scheduling, remediation, transfer options, career planning, and overall program participation.

Throughout its efforts to implement TAACCCT priorities, the College has made strides but has continued to be challenged by internal policies and procedures that hamper innovation. College leadership has expressed support for tying grant innovations to strategic planning and learning from the MSW experience. The College would be well-served by creating systematic ties from the grant to the college.

Figure 3-below depicts North Central Missouri College's self-assessment of implementation of MSW priorities and strategies using this scale:

- Rating of 0 = Not Planned: this activity is not relevant to this college's MSW grant.
- Rating of 1 = Planning but Not Started: this activity is being planned as part of the grant but implementation has not begun.
- Rating of 2 = Advancing Implementation: implementation is occurring on an on-going basis; however, changes or advancements will continue during the grant.
- Rating of 3 = Mature Implementation: implementation has reached the highest level and no additional changes or modifications are expected during the grant.
- Rating of 4 = Sustaining Implementation: the college has made a formal, tangible commitment of resources (budget, people, facilities) to continue this activity beyond the grant.

Table 1 below presents the summary comments of the third-party evaluator subsequent to an interim site visit document review. Table 2 presents the College's self-assessment of stakeholder engagement in the MoSTEMWINs grant.

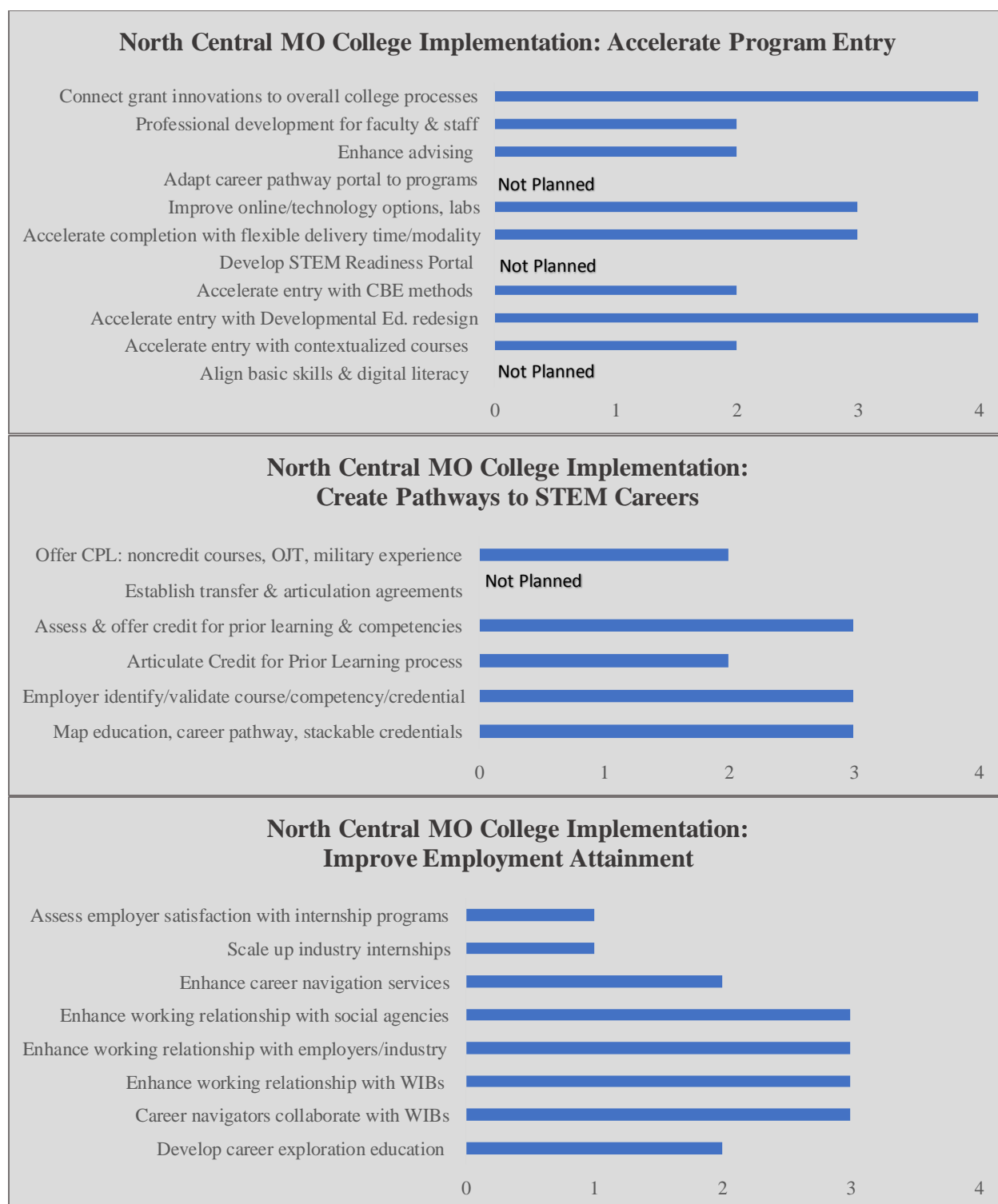


Figure 3. NCMC self-assessment of implementation.



**Table 1. North Central Missouri College's MSW Accomplishments, Challenges, Learning**

Accomplishments	Grant program and strategies have been implemented and are reaching full maturity.
	Grant program and strategies have been implemented in a manner consistent with the College's logic model.
	The College and the local career center have a positive relationship.
	Employer pleased with the adaptability of the college in meeting employer needs as well as with the quality of CPT program completers.
	Program curriculum includes soft-skills and career-specific learning strategies.
	Observed culture of organizational flexibility and adaptability with a willingness to experiment with innovations and use data to improve.
	The MSW developmental math innovation is linked to NCMC's current strategic planning initiative.
	Students value the acceleration offered by the UP program and appreciate the knowledgeable and approachable faculty and hands-on learning in the CPT program.
	College faculty and navigator have a strong working relationship.
	The College is using intake and performance data to assist with the development of predictive analytics to help identify students at the earliest point who may need additional instructional assistance.
	College is collecting and analyzing data on UP student outcomes prior to expanding the program.
	Strong faculty engagement in the development of curriculum and instructional strategies.
	The College demonstrates learning from the experiences of previous TAACCCT rounds 1 and 2 (MHW, MMW) to Round 4 (MSW) in terms of innovations offered.
	Demonstrated value of faculty development related to curriculum development and changes.
Challenges	Due to difficult market conditions, it might be difficult to secure enough students to sustain the CPT program.
	Innovations related to CBE, non-term based instruction, and credit for prior learning continue to challenge existing organizational processes and systems.
	The need to direct specific efforts to ensure that faculty and staff currently working on innovations continue to have a voice in future program/strategy developments.
Learning	Appropriate class size in the math co-requisite courses (10-12) allows faculty to work either one on one or with small groups of students.
	The value of helping students quickly connect to college culture, and understand college/course expectations, processes and procedures.
	Students value saving time and money by using the Math lab and math co-requisite courses to accelerate.
	The value of connecting faculty and student support staff both in and out of the classroom.
	Examining the possible relationship between improved (and faster) success in the developmental math sequence and increased term-to-term retention. Staff are reviewing retention data to explore if monetary benefits of improved retention outweigh additional costs associated with math instructional innovations.

**Table 2. North Central Missouri College MoSTEMWINs Stakeholder Engagement**

North Central Missouri College MoSTEMWINs Stakeholder Engagement								
<b>Roles &amp; Responsibilities</b>	<b>College Leaders</b>	<b>MoWINs Project Leaders</b>	<b>Faculty</b>	<b>Student Support Staff</b>	<b>Students</b>	<b>Employers</b>	<b>Workforce Investment Board</b>	<b>Other Ed. Partners</b>
Assist with Program Design	High	High	High	Moderate	Low	High	Low	N/A
Connect Graduates to Employment	Low	Moderate	Moderate	Moderate	N/A	Low	Low	N/A
Identify Industry Workforce Needs	Low	High	High	High	Moderate	High	Moderate	N/A
Identify Necessary Skills and Competencies	Low	Low	High	Moderate	Moderate	Moderate	Low	N/A
Identify, Access, and/or Refer Participants	N/A	Moderate	N/A	Moderate	Moderate	High	Moderate	N/A
Analyze and Interpret Student Outcome Data	Moderate	Moderate	High	High	N/A	Low	N/A	N/A
Validate Curriculum	N/A	Low	High	Moderate	Moderate	Moderate	N/A	N/A
Provide Support Services	N/A	Low	Moderate	High	N/A	Moderate	Moderate	N/A
Participate in Curriculum Development	Moderate	Low	High	High	Moderate	Moderate	N/A	N/A
Provide Financial Support	N/A	High	N/A	High	Moderate	High	High	N/A
Provide Intern/Externships or Other Work-Based Learning Activity	N/A	N/A	N/A	N/A	N/A	Low	Low	N/A
Working to Sustain or Scale Innovations beyond the Grant Period	High	High	High	High	N/A	Moderate	N/A	N/A

## Ozarks Technical Community College

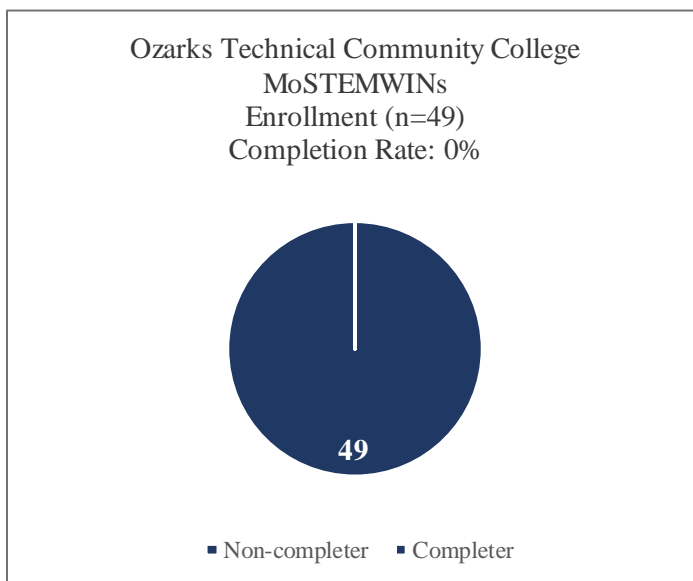
Ozarks Technical Community College's (OTC) vision for MSW as stated in their logic model is to offer an innovative and successful Chemical Laboratory Technician program producing students of such caliber, they often have employment agreements in place prior to graduation. In addition, the College seeks to nurture STEM industry partnerships.

Ozarks' MSW goal aligns with the three priorities of MSW, namely, to accelerate entry, create clear pathways to STEM, and improve employment attainment. The College is meeting their goal and MSW priorities through the Chemical Lab Technician program. This is a credit program designed to help students accelerate to an OTC Certificate of Specialization. This credit program of 31 credit hours stacks directly into the full Chemical Lab Technician AAS program and demonstrates a clear pathway to STEM careers. Course modules are built around eight week blocks. The program is hybrid, using an on-line instructional format and the students come to campus one day a week for intensive lab work.

### Chemical Laboratory Technician

*Figure 1. Ozarks Technical Community College MSW program of study.*

The program is designed for students that are college ready or near college ready. Rather than taking developmental courses to bridge into the program, students that are not college ready (but near college ready) in math and English will be enrolled in college level math and English coursework. Such students enroll in a contextualized section of English Composition that ties directly to the Chemical Lab Tech program. Faculty from English and math are partnering with Chemical Lab Tech faculty to embed and contextualize English and math instructional content within the Chemical Lab Tech curriculum. A program completer is any student who completes either the CLT Certificate of Achievement or the CLT AAS program.



*Figure 2. Ozarks Technical Community College MSW enrollment and completion.*

Based upon data provided by MCCA, as of January 2017, Ozarks Tech has enrolled 49 participants in the Chemical Laboratory Technician program. The time-frame of this mid-point report does not allow for completion of this program but the college reports students are on track to receive credentials.

Another way the College is working to accelerate students is through the support of a program navigator who is charged with recruitment, helping students complete the enrollment and admission process, program retention, and working with faculty and employers to help completers secure employment. In addition, the navigator is working with program faculty to develop a team (faculty and student support) approach to more fully connect students to program faculty and increase retention and program

completion. The navigator also assists students with job preparedness, job search, and locating internships and job opportunities.

Throughout its efforts to implement TAACCCT priorities, the College has made strides but has continued to be challenged by internal policies and procedures that hamper innovation. College leadership has expressed support for tying grant innovations to strategic planning and learning from the MSW experience. As a result, the College has created a Grant Auxiliary Team with representatives from most offices on campus to increase face-to-face time via meetings about grant progress, updates, and any upcoming issues that may affect the grant or its students.

Figure 3-below depicts Ozarks Technical Community College's self-assessment of implementation of MSW priorities and strategies using this scale:

- Rating of 0 = Not Planned: this activity is not relevant to this college's MSW grant.
- Rating of 1 = Planning but Not Started: this activity is being planned as part of the grant but implementation has not begun.
- Rating of 2 = Advancing Implementation: implementation is occurring on an on-going basis; however, changes or advancements will continue during the grant.
- Rating of 3 = Mature Implementation: implementation has reached the highest level and no additional changes or modifications are expected during the grant.
- Rating of 4 = Sustaining Implementation: the college has made a formal, tangible commitment of resources (budget, people, facilities) to continue this activity beyond the grant.

Table 1 below presents the summary comments of the third-party evaluator subsequent to an interim site visit document review. Table 2 presents the College's self-assessment of stakeholder engagement in the MoSTEMWINs grant.

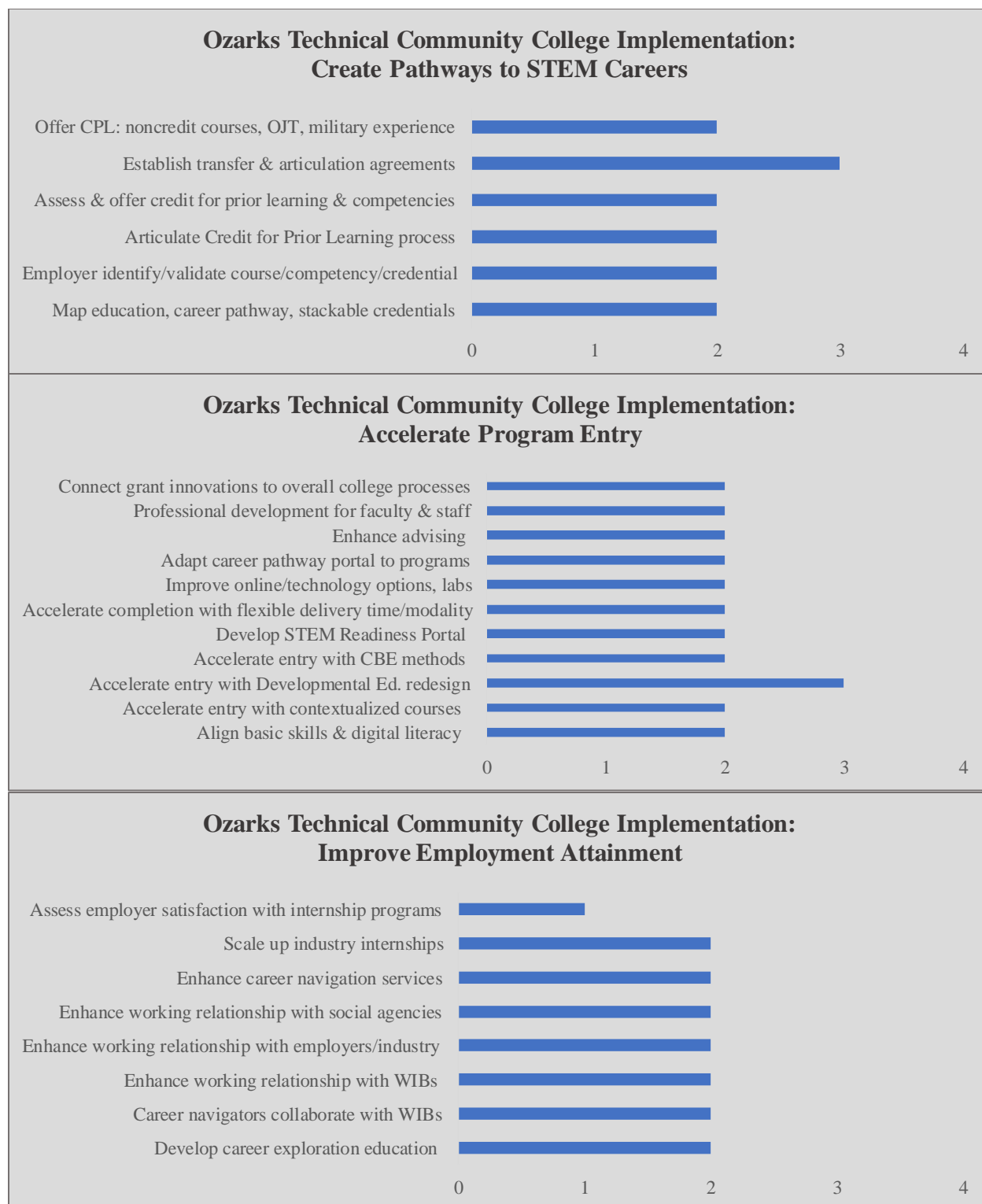


Figure 3. OTCC self-assessment of implementation.

**Table 1. Ozarks Technical Community College's MoSTEMWINs Accomplishments, Challenges, & Learning**

<b>Accomplishments</b>	Grant program and strategies have been implemented and are reaching full maturity.
	Grant program and strategies have been implemented in a manner consistent with the College's logic model.
	Employer engagement is strong and faculty continue to work with employers to improve the curriculum and build upon stackable credentials.
	Positive feedback from students regarding instructional design, curriculum, and student support services. Students mentioned the value of stackable credentials.
	Strong faculty leadership.
	Faculty actively engaged in curriculum development and design.
	College has built external program partnerships with four-year colleges.
	The College and the local career center have a positive relationship.
	Faculty express appreciation of and recognize value add of advisor.
	Leadership is supportive of grant and seeking strategies to more fully connect grant innovations to mainstream processes. (i.e., connect grant navigator to Institutional Research, creation of internal group of grant and non-grant staff to discuss organizational processes).
	Advisor is pro-actively recruiting students from OTC courses, the community, other four-year institutions, etc.
	Area state universities are partnering with the College and allow College staff to recruit university students to the program.
	The College demonstrates learning from the experiences of previous TAACCCT rounds 1 & 2 (MHW, MMW) to Round 4 (MSW) in terms of innovations offered.
	Program curriculum includes soft-skills and career-specific learning strategies.
<b>Challenges</b>	Organizational silos can make it difficult to scale innovations.
	Innovations related to CBE, non-term based instruction, and credit for prior learning continue to challenge existing organizational processes and systems.
	The need to direct specific efforts to ensure that faculty and staff currently working on innovations continue to have a voice in future program/strategy developments.
	Department head (and key faculty leader) is leaving the college.
	Grant staff mentioned DOL grant requirements can make it difficult to adapt grant strategies along the way. Faculty wanted to modify the use of hybrid instruction, but indicated that such a change could not take place because of grant requirements.
	Self-paced instruction and allowing students to move forward at an accelerated rate create organizational challenges due to the reliance on the 16-week semester format.
<b>Learning</b>	Students and faculty see value in "academic specific advising".
	Student support and advising works best as a continuous process in which staff support students not only at the start, but throughout their OTC experience.
	Students see value in stackable credentials.
	Project-based learning is strong piece of the curriculum.
	Even though OTC has moved to self-directed placement, the college may wish to explore a "math for science" bridge course to help students prepare for math requirements related to science courses/programs.
	Hybrid/on-line instruction has not been a good fit for students in the grant program.
	Recruiting takes more time than expected.

**Table 2. Ozarks Technical Community College MoSTEMWINs Stakeholder Engagement**

Ozarks Technical Community College MoSTEMWINs Stakeholder Engagement								
<b>Roles &amp; Responsibilities</b>	College Leaders	MoWINs Project Leaders	Faculty	Student Support Staff	Students	Employers	Workforce Investment Board	Other Ed. Partners
Assist with Program Design	Low	High	High	Low	N/A	High	N/A	Low
Connect Graduates to Employment	N/A	High	Moderate	High	N/A	Moderate	Moderate	N/A
Identify Industry Workforce Needs	Low	High	High	N/A	N/A	High	Moderate	Low
Identify Necessary Skills and Competencies	N/A	High	High	High	N/A	High	Moderate	Low
Identify, Access, and/or Refer Participants	N/A	High	Moderate	High	Low	Low	High	Low
Analyze and Interpret Student Outcome Data	N/A	Moderate	Low	High	N/A	N/A	Low	N/A
Validate Curriculum	Moderate	Moderate	High	Low	N/A	Moderate	N/A	Low
Provide Support Services	N/A	High	Moderate	High	N/A	N/A	High	Low
Participate in Curriculum Development	Low	High	High	Low	N/A	High	N/A	N/A
Provide Financial Support	High	N/A	N/A	Moderate	N/A	N/A	N/A	N/A
Provide Intern/Externships or Other Work-Based Learning Activity	N/A	Moderate	N/A	Moderate	N/A	Moderate	Moderate	Low
Working to Sustain or Scale Innovations beyond the Grant Period	Low	High	Moderate	Moderate	N/A	N/A	N/A	N/A

## St. Charles Community College

St. Charles Community College's (SCC) vision for MSW as stated in their logic model is to offer programs in response to industry/employer needs which assist participants seeking career pathway advancements. This goal aligns with the three priorities of MSW, namely, to accelerate entry, create clear pathways to STEM, and improve employment attainment. The College is deploying these strategies using the programs of study shown in Figure 1. The CPT, CPT-Green Production, and Welding programs are non-credit and lead to certificates of completion, and the Information Technology/Oracle Certification is a credit program leading to a Certificate of Specialization.

Each program was built with employer input and modified based upon lessons learned from previous MoWINs efforts. Programs include industry credentials and stack into further educational programs. The College has developed a collaborative teaching model (faculty and navigators) to incorporate contextualized adult basic education into technical training with the Adult Education and Literacy/Certified Production Technician (AEL/CPT) program. In addition, program curriculum includes attention to soft-skills to help ensure completers are "workplace ready".

- 
- **Certified Production Technician:**
    - **Green Production**
  - **Welding:**
    - **AWS level 1, 2, & Specialty**
  - **Information Technology / Oracle Certification**

*Figure 1. St. Charles Community College MSW programs of study.*

St. Charles' MSW grant programs provide career pathway options linked to career opportunities in a variety of entry level industrial, technical, and information technology occupations. In addition, the college is making credit for prior learning available for eligible participants to test out of some courses and move through the program at an accelerated pace. The College is using its Manufacturing/Industry Portal to provide students with the appropriate set of services needed to help students begin their MSW program. Such services currently include registration and program advising assistance, and academic then career assessment and planning.

St. Charles is accelerating entry by piloting CBE in its Welding program whereby students with content knowledge will be able to progress more quickly through their programs. Additionally, the College expects the Manufacturing/Industry Portal program to provide the venue for the Navigator to help create a pathway for students who begin with development education needs in English and/or math. Currently St. Charles MSW students are supported by a navigator who assists with recruitment, registration, and retention efforts and is also charged with developing stronger connections with employers to help secure employment for program completers. Program faculty are actively engaged with employers and closely connected with the navigator to address the goals of retention, completion, and employment. In addition, the college has implemented CANVAS and navigators are partnering with faculty to use this software to track student progress and attendance.

Due to space limitations, the College offers courses at employer sites and secondary school sites and is seeking additional property to address such concerns. The College also is addressing the challenge of hiring qualified staff to teach technical programs by seeking referrals from industry and educational partners.

In large part, due to their experiences with MoWINs, the grant team is viewed by the College as an "Research and Development" component. Executive leadership expressed their desire to understand how to learn from the experiments/innovations occurring in the grant to support the College's expansion of



career and technical education through workforce development partnerships. In addition, the College is adding certain “grant” data elements to the standard college application. The goal is to acquire additional student background data to support improving student support systems. Although leadership values the innovations learned by grant staff, the College lacks a systematic internal process for sharing grant innovations and lessons learned with departments outside of workforce development.

Based upon data provided by MCCA, as of January 20, 2017, approximately 35% of St. Charles’ 263 participants have completed their full program of study as shown in Figure 2. (MCCA provided updated summary data to the colleges on January 30, 2017 showing 277 participants and 149 program completers.

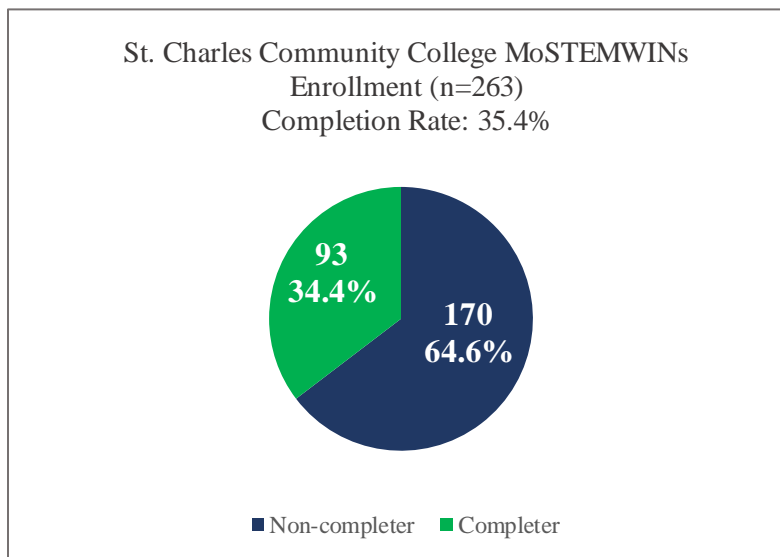


Figure 2. St. Charles Community College MSW enrollment and completion.

Figure 3-below depicts St. Charles Community College’s self-assessment of implementation of MSW priorities and strategies using this scale:

- Rating of 0 = Not Planned: this activity is not relevant to this college's MSW grant.
- Rating of 1 = Planning but Not Started: this activity is being planned as part of the grant but implementation has not begun.
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Table 1 below presents the summary comments of the third-party evaluator subsequent to an interim site visit document review. Table 2 presents the College’s self-assessment of stakeholder engagement in the MoSTEMWINs grant.

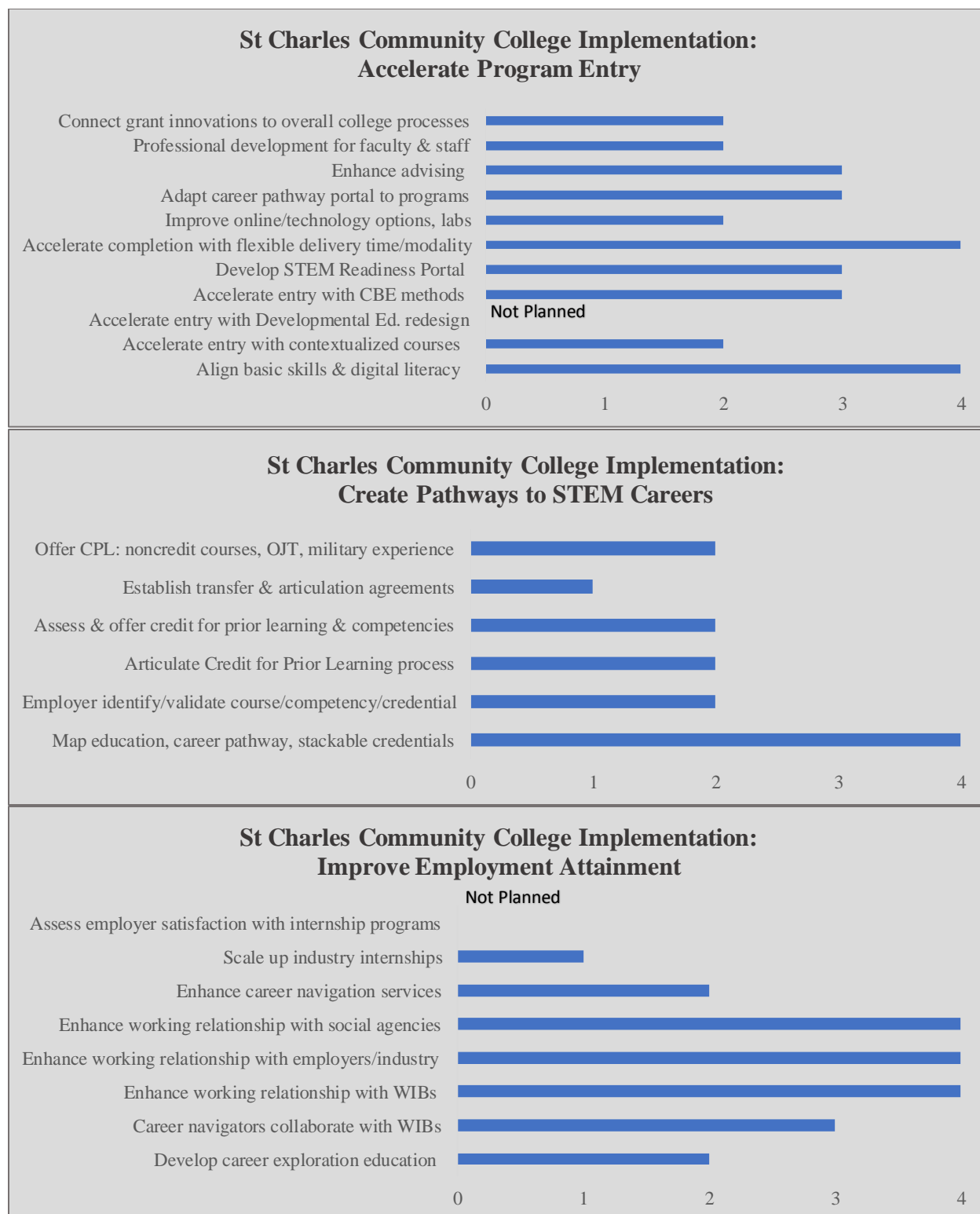


Figure 3. SCC self-assessment of implementation.

**Table 1. St. Charles Community College's MSW Accomplishments, Challenges, & Learning**

Accomplishments	Grant program and strategies have been implemented and are reaching full maturity.
	Grant program and strategies have been implemented in a manner consistent with the College's logic model.
	College views grant staff as the R&D component of the institution and is working to understand how it can learn from the experiments/innovations occurring in the grant.
	Employers are pleased with the college's quality of completers, and the College's engagement with employers continues to develop.
	Adapting and restructuring of CPT and Welding programs to incorporate employer feedback and improve certification pass rates.
	The College demonstrates learning from the experiences of previous TAACCCT rounds (MHW, MMW) to Round 4 (MSW) in terms of innovations offered. This is especially important as the College continues to expand its career and technical educational offerings.
	College is exploring non-credit to credit bridge programs associated with career and technical education and career pathways.
	Executive leadership supports grant innovations, experimentation, and the college's expansion of career and technical education through workforce development partnerships.
	Faculty are actively engaged with employers. In addition, faculty appear to work well as a team.
	Curriculum includes the development of soft-skills to help ensure completers are "workplace ready".
	College has developed a collaborative teaching model (faculty and navigators) to incorporate contextualized adult basic education into technical training and using CANVAS software to track student progress and attendance. College is adding certain "grant" data elements to the standard college application. The goal is to acquire additional student background data to support improving student support systems.
Challenges	Continued support for the expansion of Credit for Prior Learning.
	Lack of systematic internal process for sharing grant innovations and lessons learned with departments outside of workforce development.
	Employer demand for grant programs is strong, but College currently does not have the grant budget to support additional program/course offerings.
	Difficulty meeting the demand for qualified faculty in certain career technology areas.
Learning	Need for increased lab resources and hands-on learning opportunities for the CPT program.
	Connecting grant innovations to mainstream practices requires systematic attention.
	Accelerated programs and programs aimed at under-served target populations require increased intentional/intrusive support services to help ensure student success.
	Connecting workforce development programs to standard career and technical education through career pathways would assist in meeting student and employer needs.
	Employers are willing to engage and share needs and ideas, but expect colleges to respond in a meaningful manner to their requests.

**Table 2. St. Charles Community College MoSTEMWINs Stakeholder Engagement**

St. Charles Community College MoSTEMWINs Stakeholder Engagement								
<b>Roles &amp; Responsibilities</b>	<b>College Leaders</b>	<b>MoWINs Project Leaders</b>	<b>Faculty</b>	<b>Student Support Staff</b>	<b>Students</b>	<b>Employers</b>	<b>Workforce Investment Board</b>	<b>Other Ed. Partners</b>
Assist with Program Design	Moderate	High	High	Moderate	Moderate	Moderate	Low	Moderate
Connect Graduates to Employment	N/A	High	High	High	Low	High	Low	N/A
Identify Industry Workforce Needs	Moderate	High	High	Moderate	Low	High	Moderate	N/A
Identify Necessary Skills and Competencies	N/A	High	High	Moderate	N/A	High	Low	N/A
Identify, Access, and/or Refer Participants	Moderate	High	High	High	Low	Moderate	Moderate	N/A
Analyze and Interpret Student Outcome Data	High	High	High	High	N/A	N/A	N/A	N/A
Validate Curriculum	Moderate	High	High	Low	Low	High	N/A	N/A
Provide Support Services	Low	High	High	High	N/A	N/A	High	N/A
Participate in Curriculum Development	Low	High	High	Low	Low	High	N/A	Low
Provide Financial Support	Moderate	N/A	N/A	N/A	N/A	Moderate	High	N/A
Provide Intern/Externships or Other Work-Based Learning Activity	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Working to Sustain or Scale Innovations beyond the Grant Period	High	High	High	High	N/A	High	High	N/A

## St. Louis Community College

St. Louis Community College's vision for MSW as stated in their logic model:

- Integrate credit and non-credit instruction in a career pathway
- Use PLA and CBE to accelerate completion
- Employ Career Pathway Coaches and Advisors working collaboratively in support of CTE students in an intrusive student support model
- Deliver developmental education to CTE students through a self-paced, modularized and technology-enabled Adult Learning Academy contextualized to career pathways and staffed by professionals

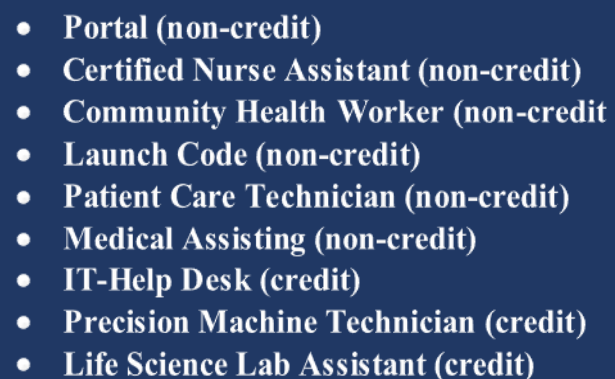
St. Louis' vision aligns with the three priorities of MSW, namely, to accelerate entry, create clear pathways to STEM, and improve employment attainment. The College is deploying these strategies using the programs of study shown in Figure 1.

St. Louis' efforts to accelerate entry begins with working to ensure MSW participants are properly connected to their desired program of study by enrolling all students in the MSW Portal program. The MSW Portal helps integrate students into their program of study and includes skills assessment; NCRC testing and completion; a career blueprint; a STEM readiness assessment; internet/computer skill development; work ethics/value development aimed at improving work ready soft-skills; and contextualization of reading and math to STEM/Science areas in the Adult Learning Academy (ALA). Progression through the Portal depends on a participant's needs and prior academic/workplace preparation.

Once in the Portal, the participant can progress using a self-paced model. Although actual time to Portal completion may vary, most students complete the Portal within one academic term. Completers of the Portal then continue into one of the College's MSW career programs.

The ALA offers students an opportunity to work through developmental English and math in a self-paced, tutorial environment. Students in the ALA are completing their developmental courses in half the time of the College's traditional developmental math or English course with success rates of approximately 70%. The ALA has been designated as a promising practice by the U.S. Department of Education and the College has scaled the program to a core campus through a corporate donation, and college-wide faculty have endorsed the program as an alternative to traditional developmental education courses.

Through MSW, the College is offering programs designed to serve as pathways to STEM careers for the adult, low-skilled, unemployed/under-employed target population. The college recognizes that this population brings a variety of social, economic and academic challenges to their MSW experience. Using navigators and program faculty working as academic/student support teams, students receive a comprehensive set of strategies and interventions to help them complete their program and secure employment. Such services include a career and academic pathway coach; enhanced technology support related to student services and instruction; as well as contextualized ALA instruction mentioned above. From the first point of contact, Navigators actively engaged with students to help them progress and succeed throughout their entire MSW experience.

- 
- **Portal (non-credit)**
  - **Certified Nurse Assistant (non-credit)**
  - **Community Health Worker (non-credit)**
  - **Launch Code (non-credit)**
  - **Patient Care Technician (non-credit)**
  - **Medical Assisting (non-credit)**
  - **IT-Help Desk (credit)**
  - **Precision Machine Technician (credit)**
  - **Life Science Lab Assistant (credit)**

*Figure 1. St. Louis Community College MSW programs of study.*

The college is leveraging its relationship with employers to meet local workforce needs and, in one case, has developed a relationship where an employer partner of the Medical Assistant program selects and pre-hires students for the program, pays a stipend and tuition, provides clinical experience, and hires a high percentage of program completers. The college has focused on leveraging employer and other CBO relationships to improve employment attainment for students.

Based on data provided by MCCA, as of January 20, 2017, approximately 46% of St. Louis' 246 participants have completed their full program of study as shown in Figure 2. *(MCCA provided updated summary data to the colleges on January 30, 2017 showing that 135 participants had completed their program of study).*

Throughout its efforts to implement TAACCCT priorities, the College has made strides but has continued to be challenged by the complexity of the federal student aid/WIOA application processes. Although in the past college grant staff has struggled with internal policies and procedures that hamper innovation, the current administration has expressed support for tying grant innovations to strategic planning and learning from the MSW experience.

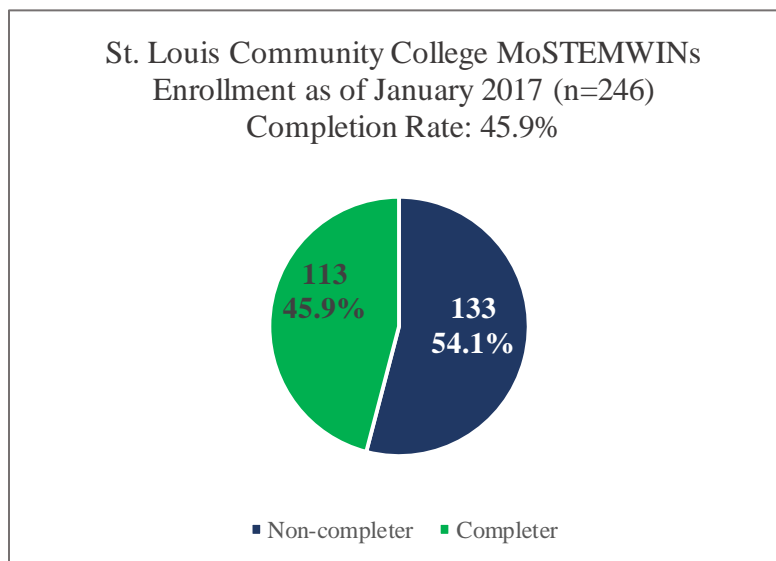


Figure 2. St. Louis Community College MSW enrollment and completion.

Figure 3-below depicts St. Louis Community College's self-assessment of their implementation of MSW priorities and strategies using this scale:

- Rating of 0 = Not Planned: this activity is not relevant to this college's MSW grant.
- Rating of 1 = Planning but Not Started: this activity is being planned as part of the grant but implementation has not begun.
- Rating of 2 = Advancing Implementation: implementation is occurring on an on-going basis; however, changes or advancements will continue during the grant.
- Rating of 3 = Mature Implementation: implementation has reached the highest level and no additional changes or modifications are expected during the grant.
- Rating of 4 = Sustaining Implementation: the college has made a formal, tangible commitment of resources (budget, people, facilities) to continue this activity beyond the grant.

Table 1 below presents the summary comments of the third-party evaluator subsequent to an interim site visit document review. Table 2 presents the College's self-assessment of stakeholder engagement in the MoSTEMWINs grant.



Figure 3: STLCC self-assessment of implementation.

**Table 1. St. Louis Community College's MSW Accomplishments, Challenges, & Learning**

<b>Accomplishments</b>	Grant programs and strategies have been implemented and are reaching full maturity.
	Grant program and strategies have been implemented in a manner consistent with the College's logic model.
	PCT and MA employers pleased with college's responsiveness and quality of program completers.
	Students appreciate the customized and personal instructional approach of the Portal and value the acceleration offered by the Adult Learning Academy.
	Students value the assistance provided by the coach/intrusive advisor.
	The faculty and coach/advisor are working collaboratively and faculty value advisors' contributions. Faculty are team-teaching
	The College demonstrates learning from the experiences of previous TAACCCT rounds 1, 2, and 3 (MHW, MMW, MRDTL) to Round 4 (MSW) in terms of innovations offered.
	Adult Learning Academy shows success and continues to adapt based upon data.
	Efforts to more fully connect grant-funded ALA faculty and non-grant developmental education faculty have started, but the College recognizes that more systematic attention to this connection is needed.
	Demonstrated commitment to use of OER: <ul style="list-style-type: none"> <li>◦ Use of Skills Commons resources to find resources</li> <li>◦ Updating and appropriately tagging OER resources previously posted to maintain currency.</li> </ul>
	College has paid attention to the workload and demands of recruiting and advising and thus has designated additional staff resources for recruitment and advising. These staff work together to ensure a continuous support process for students.
	The College recognizes the need for professional development for advisors, faculty, and other staff to get the most from the team approach.
	Grant administrator placed on Title III team to go after new funding for redesign of developmental education.
	College executive leadership stated a commitment to scaling grant innovations related to ALA and intrusive student support and this is evidenced by leadership's decision to direct a large corporate donation to expand the ALA approach external to the MSW grant.
	Leadership stated a commitment to increased efforts to more effectively on-board students into career and technical education programs.
	Leadership expressed a desire to connect successful grant innovations to strategic planning processes.
	The MoWINs Portal program has been validated by U.S. Department of Education as a Promising Practice.
<b>Challenges</b>	Lack of systematic internal process for sharing grant innovations with overall College.
	Non-grant operations lack incentive to explore and learn about grant innovations.
	Faculty and staff resistance to change.
	Reliance on traditional academic calendar.
	Organizational silos and fragmentation related to instruction and student support.
	Separation between credit and non-credit structures.
	CBE is only being done in the PORTAL, too hard on the credit side.
	Recruitment is time consuming and only ten percent of those who complete an online interest form end up in a program.



Learning	Students value the instructional team based approach to teaching and learning. In addition, faculty who have worked with this approach recognize its value.
	Connecting grant innovations to mainstream practices requires systematic attention.
	Increased attention to student intake data and predictive analytics would aid in providing intrusive student advising and coaching in a more efficient and effective manner.
	Accelerated programs and programs aimed at under-served target populations require increased intentional/intrusive support services to help ensure student success.

**Table 2. St. Louis Community College MoSTEMWINS Stakeholder Engagement**

St. Louis Community College MoSTEMWINS Stakeholder Engagement								
<b>Roles &amp; Responsibilities</b>	College Leaders	MoWINS Project Leaders	Faculty	Student Support Staff	Students	Employers	Workforce Investment Board	Other Ed. Partners
Assist with Program Design	Low	High	High	Low	Low	High	Low	N/A
Connect Graduates to Employment	Low	High	Low	Low	High	High	Low	N/A
Identify Industry Workforce Needs	Low	High	Low	Low	Low	High	Low	N/A
Identify Necessary Skills and Competencies	Low	High	High	Low	N/A	High	Low	N/A
Identify, Assess, and/or Refer Participants	Low	High	Low	Moderate	Low	High	Moderate	N/A
Analyze and Interpret Student Outcome Data	Low	High	High	Low	N/A	High	Low	N/A
Validate Curriculum	Low	High	High	N/A	N/A	High	Low	N/A
Provide Support Services	Low	High	High	Moderate	N/A	Moderate	Low	N/A
Participate in Curriculum Development	Low	High	High	N/A	N/A	High	N/A	N/A
Provide Financial Support	Moderate	N/A	N/A	Low	N/A	Moderate	Low	N/A
Provide Intern/Externships or Other Work-Based Learning Activity	Low	N/A	N/A	Low	N/A	High	Low	N/A
Working to Sustain or Scale Innovations beyond the Grant Period	Moderate	High	High	Low	N/A	Moderate	Low	N/A

## State Fair Community College

State Fair Community College's vision for MSW as stated in their logic model: as a result of the MoSTEMWINs grant, SFCC uses a "Portal for Student Success" that includes navigators, an early alert system, and many new strategies to ensure student success.

State Fair's goal aligns with the three priorities of MSW, namely, to accelerate entry, create clear pathways to STEM, and improve employment attainment. The College is meeting their goal and MSW priorities by using MSW to fund five Navigators to provide intrusive/intensive student support services to students enrolled in the college's allied health programs. The role of these navigators in supporting the MSW priorities is evident as four of the Navigators support recruitment, retention, and program completion efforts and the fifth Navigator works with student and employers to help students find employment upon program completion. Each of the Navigators is responsible for a set of specific allied health programs.

### Navigators for Allied Health programs

Figure 1. State Fair Community College MSW program of study.

All Navigators received cross training associated with SFCC's enrollment-related processes, as such each Navigator is knowledgeable of all student support services from registration, financial aid, advising, personal and academic counseling, career development, and job placement. The Navigator's initial contact with the student is designed to provide the student with a personal connection to the campus and the student's program of study. In addition, the Navigator works with the student during this initial contact to provide a clear program pathway to completion and job attainment. As part of the program pathway and advising processes, SFCC is also directing attention to reworking its developmental education courses to provide a stronger bridge into college-level coursework.

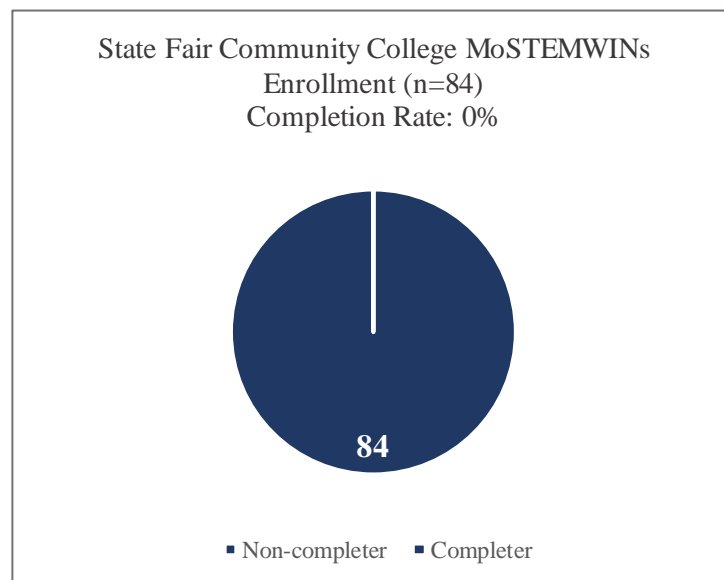


Figure 2. State Fair Community College MSW enrollment and completion.

Based upon data provided by MCCA as of January 20, 2017, State Fair has enrolled 84 participants in Allied Health AAS programs affiliated with the MSW navigators. (MCCA provided updated summary data to the colleges on January 30, 2017 showing 280 participants and 80 program completers.) The time-frame of this report does not allow for completion of these two-year programs but the college reports that retention rates in those programs have improved over previous years.

SFCC purchased and implemented STARFISH to support their intrusive advising and student connection efforts. Navigators and faculty have formed program-related Student Success Teams to support instructional and student support processes. In addition, the Student Success Teams are collecting data

related to student loss and momentum points and plan to customize STARFISH to provide early alert and student advising information associated with such points.

It should be noted that SFCC is using lessons learned from their Rounds 1 and 2 TAACCCT grants to expand and improve their intrusive student support services. SFCC used data from previous TAACCCT grants to document a Return on Investment (ROI) associated with the use of intrusive student support and is using Round 4 to scale intrusive student advising. The College has been highlighted by the Department of Labor as an example of successful sustainability efforts across the core elements of TAACCCT <http://www.jff.org/sites/default/files/initiatives/files/TAACCCT-Sustainability-Toolkit%20011917.pdf>

Throughout its efforts to implement TAACCCT priorities, the College has made strides but has continued to be challenged by internal policies and procedures that hamper innovation. College leadership has expressed support for tying grant innovations to strategic planning and learning from the MSW experience.

Figure 3-below depicts State Fair Community College's self-assessment of implementation of MSW priorities and strategies using this scale:

- Rating of 0 = Not Planned: this activity is not relevant to this college's MSW grant.
- Rating of 1 = Planning but Not Started: this activity is being planned as part of the grant but implementation has not begun.
- Rating of 2 = Advancing Implementation: implementation is occurring on an on-going basis; however, changes or advancements will continue during the grant.
- Rating of 3 = Mature Implementation: implementation has reached the highest level and no additional changes or modifications are expected during the grant.
- Rating of 4 = Sustaining Implementation: the college has made a formal, tangible commitment of resources (budget, people, facilities) to continue this activity beyond the grant.

Table 1 below presents the summary comments of the third-party evaluator subsequent to an interim site visit document review. Table 2 presents the College's self-assessment of stakeholder engagement in the MoSTEMWINS grant.

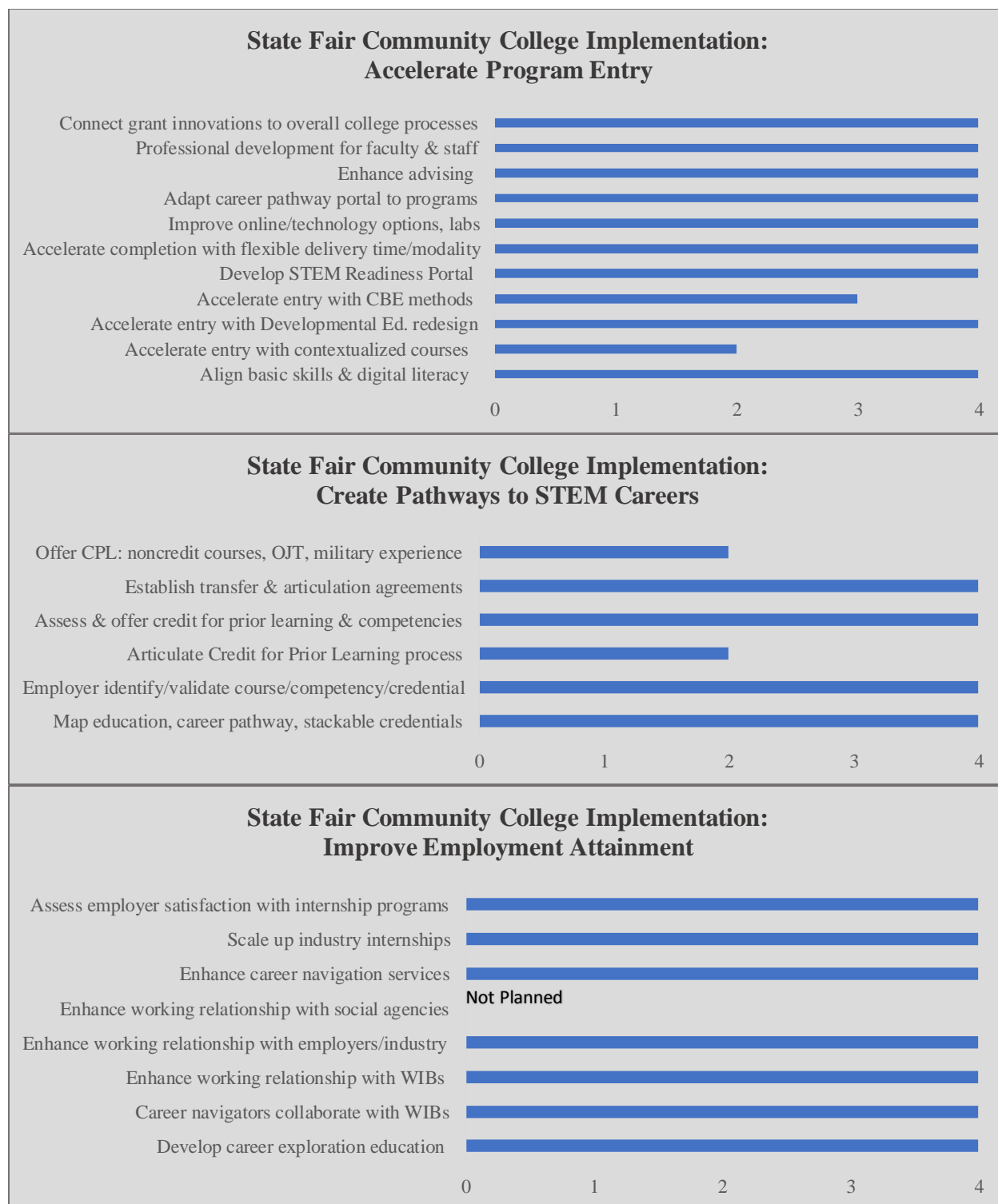


Figure 3. SFCC self-assessment of implementation.

**Table 1. State Fair Community College’s MoSTEMWINs Accomplishments, Challenges, & Learning**

<b>Accomplishments</b>	Grant advising strategy has been implemented and is reaching full maturity.
	Grant program and strategies have been implemented in a manner consistent with the College’s logic model.
	The College and the local career center have a positive relationship.
	Employers of nursing and dental hygiene completers were interviewed and they expressed pleasure with the quality of completers as well as with State Fair’s responsiveness to their needs.
	Students value the navigator’s assistance regarding program requirements, financial aid, and other types of available assistance.
	The coordination and engagement of faculty and navigators in developing the student success team concept has led to a strong partnership between faculty and navigators as well as provided a solid foundation for continuous improvement.
	Faculty appreciate working as a team with the navigator and stated that they could not imagine working without a team focused on student success.
	Navigators provide instruction which includes soft-skills and career-specific learning strategies.
	The College demonstrates learning from the experiences of previous TAACCCT rounds 1 & 2 (MHW, MMW) to Round 4 (MSW) in terms of innovations offered.
	Navigators and faculty attend employer program advisory meetings. In addition, navigators are included in academic department and division meetings.
	Success teams reach across organizational functions and leadership from instruction and student support meet and work together to remove organizational silos.
	The college seems to have heeded the experience and advice of the navigators in the implementation of their new advising model, Starfish, and the design of metrics to evaluate student need.
<b>Challenges</b>	College is working to address how to best provide navigator services to meet the needs of off-campus/online students.
	The College is searching for criteria to predict both student need for and timing of the services of the navigators.
	The need to direct specific efforts to ensure that faculty and staff currently working on innovations continue to have a voice in future program/strategy developments.
	The College is working to improve students’ initial use of navigator’s services. Once students have received such services, they recognize the value but students can be slow to “buy-in” to the model. Recognition that no matter how valuable a service/concept might be to student success, most students “don’t do optional”.
	The navigator job and role can be overwhelming. Without appropriate attention to this issue, navigator job turnover could be a problem.
	The College recognized the need for staff development for all members of the student success teams but is challenged by finding the time and resources to devote to such development.
<b>Learning</b>	Moving the navigators into the academic departments increased navigator-student engagement.
	Early faculty involvement in the development of student success teams is important.
	The development of clear roles and responsibilities for student success team members (faculty and navigators) is important.
	Creating and supporting organizational space for experimentation and testing of innovations is important.

	STARFISH and related technology resources are most effective when they are viewed as a “faculty and student support solution”, rather than an “IT solution”.
	The use of data/analysis to identify specific return on investment related to the navigators and student success teams is valued. Attention to increased revenue associated with increased retention and improved performance on DHE performance measures is of particular importance.
	By using navigators to focus on student support and advising, faculty have more time to focus on instruction and teaching.
	As a result of student success teams the college is becoming more “intentional” in how it views data and engages with students.

**Table 2. State Fair Community College MoSTEMWINs Stakeholder Engagement**

State Fair Community College MoSTEMWINs Stakeholder Engagement								
Roles & Responsibilities	College Leaders	MoWINs Project Leaders	Faculty	Student Support Staff	Students	Employers	Workforce Investment Board	Other Ed. Partners
Assist with Program Design	Moderate	N/A	High	Moderate	N/A	Moderate	N/A	N/A
Connect Graduates to Employment	Low	Moderate	High	High	Low	High	High	Moderate
Identify Industry Workforce Needs	Moderate	N/A	High	High	N/A	High	High	N/A
Identify Necessary Skills and Competencies	Moderate	Moderate	High	High	N/A	High	High	N/A
Identify, Access, and/or Refer Participants	Low	Low	High	High	Moderate	High	High	N/A
Analyze and Interpret Student Outcome Data	High	High	High	High	N/A	N/A	N/A	N/A
Validate Curriculum	High	N/A	High	N/A	N/A	N/A	N/A	N/A
Provide Support Services	Moderate	High	Moderate	High	N/A	Low	High	N/A
Participate in Curriculum Development	Moderate	N/A	High	Low	N/A	High	N/A	Low
Provide Financial Support	Moderate	High	Low	High	N/A	Low	High	N/A
Provide Intern/Externships or Other Work-Based Learning Activity	Low	Low	High	High	N/A	High	High	N/A
Working to Sustain or Scale Innovations beyond the Grant Period	High	High	N/A	High	N/A	N/A	N/A	N/A



## State Technical College of Missouri

State Tech's vision for MSW as stated in their logic model is to offer entry-level computer concepts in response to industry/employer needs and to assist participants seeking career pathway advancements. The College's goal aligns with the three priorities of MSW, namely, to accelerate entry, create clear pathways to STEM, and improve employment attainment.

State Tech's approach is focused on accelerating entry to STEM programs and improving employment opportunities. The college is doing so through its Computer Concepts program consisting of three stackable credentials: NCRC, Key Boarding Certificate, and the Microsoft Digital Literacy Certificate. The program is designed to meet a need the College discovered while implementing the first two rounds of TAACCCT: Students lacking rudimentary computer skills. During its previous TAACCT programming, the College found a population who were unprepared to enter programs due to insufficient computer skills. Moreover, these students did not have the computer skills to undertake a job search in today's environment of digital job postings. Students in the program are supported through a Navigator who is charged with recruitment and working with faculty and students to complete the program, and acquire employment.

### Computer Concepts

Figure 1. State Technical College of Missouri MSW program of study.

The program is offered at multiple off-campus locations and includes the use of a mobile lab. Program staff are directing significant efforts toward the development of community-based and social service agency partnerships with the college. The College is pleased with the progress it has made in developing relationships with employers, community-based organizations, and the local WIB.

Program completers are defined as students who complete all three stackable credentials and are awarded the State Technical College Computer Concept Certificate. The program is non-credit and is 32 clock hours in length (2.56 credit hours). Based upon data provided by MCCA as of January 2017, approximately 50% of State Tech's participants have completed their full program of study as shown in Figure 2. (*MCCA provided updated summary data to the colleges on January 30, 2017 showing 133 participants and 82 program completers.*)

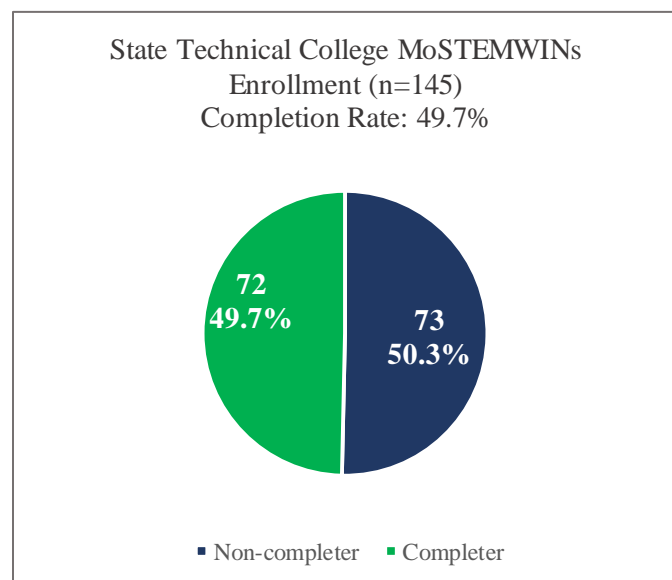


Figure 2. State Technical College's MSW enrollment and completion.

State Technical College has created the opportunity for program completers to connect to on-campus credit programs through use of the college's Credit for Prior Learning process. Students who complete the full program certificate may apply for Credit for Prior Learning (C4PL). If approved, the computer concept coursework is transitioned into the college's AAS degree program.

Throughout its efforts to implement TAACCCT priorities, the College has made strides but has continued to be challenged by internal policies and procedures that hamper innovation.

Figure 3-below depicts State Technical College's self-assessment of implementation of MSW priorities and strategies using this scale:

- Rating of 0 = Not Planned: this activity is not relevant to this college's MSW grant.
- Rating of 1 = Planning but Not Started: this activity is being planned as part of the grant but implementation has not begun.
- Rating of 2 = Advancing Implementation: implementation is occurring on an on-going basis; however, changes or advancements will continue during the grant.
- Rating of 3 = Mature Implementation: implementation has reached the highest level and no additional changes or modifications are expected during the grant.
- Rating of 4 = Sustaining Implementation: the college has made a formal, tangible commitment of resources (budget, people, facilities) to continue this activity beyond the grant.

Table 1 below presents the summary comments of the third-party evaluator subsequent to an interim site visit document review. Table 2 presents the College's self-assessment of stakeholder engagement in the MoSTEMWINs grant.

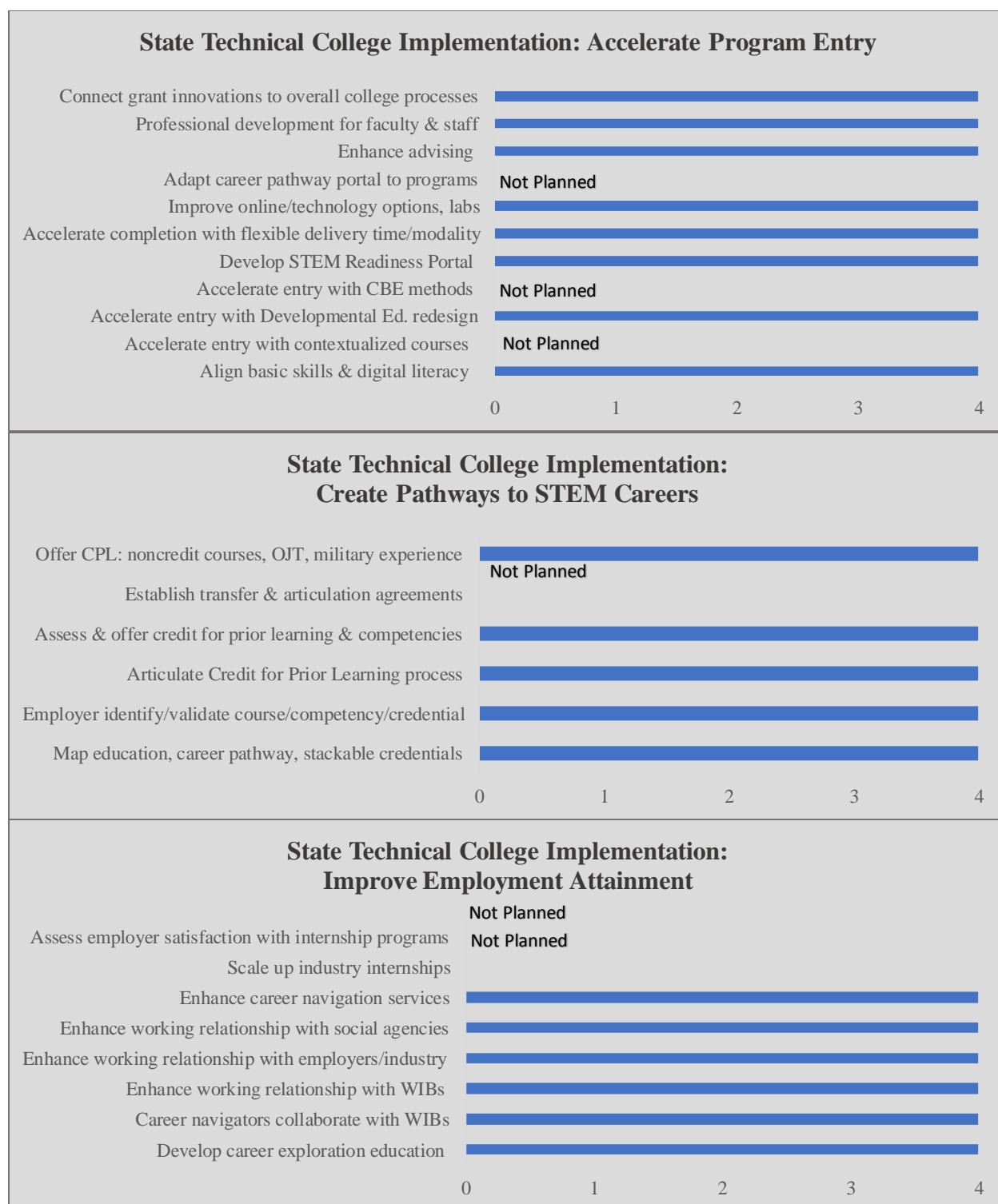


Figure 3. STCM self-assessment of implementation.

**Table 1. State Technical College of Missouri's MoSTEMWINs Accomplishments, Challenges, & Learning**

<b>Accomplishments</b>	Grant program and strategies have been implemented and are reaching full maturity.
	Grant program and strategies have been implemented in a manner consistent with the College's logic model.
	The College demonstrates learning from the experiences of previous TAACCCT rounds (MoHealthWINs and MoManufacturingWINs) in terms of innovations offered. For example, the College now requires credit program completers take the NCRC examination.
	Employers and community-based partners are pleased with the Computer Concepts program. Community-based partners recognize that the program is increasing participants' computer skills as well as participant self-concept.
	Partnership with area Career Centers (WIB) have improved and State Technical College now has a classroom at the Jefferson City Career Center.
	Students value the skills presented in the computer concepts course.
	Through MoWINs, the College has outlined a model for program acceleration and the use of credit for prior learning.
	The College is expanding its relationships with social service agencies and reaching out to non-traditional students who are unprepared for the College's academic programs.
	MoWINs data collection and data reporting have helped the college increase its attention to student data and related analysis.
<b>Challenges</b>	Lack of systematic internal process for sharing grant innovations and lessons learned with departments outside of the grant.
	The College recognizes the value of using non-credit, short-term training program to increase access and its impact on target populations, but lacks an organization model to support non-credit programs for non-traditional students while maintaining the college's high program completion and completer employment. This should be addressed if the College seeks to continue serving this target population with nontraditional programming.
	Program retention and completion is a challenge due to "life issues" facing target populations.
	Although students, faculty, and employers expressed satisfaction with the content of the computer concepts program, some students could benefit from additional job search and employability workshops including work-readiness and soft-skills development.
	Securing employment for program completers and acquiring the required employment follow-up information.
<b>Learning</b>	Connecting grant innovations to mainstream practices requires systematic attention. The College sees the potential for this to occur through a new faculty development function/person.
	Accelerated programs and programs aimed at under-served target populations require effective support services to help ensure student success.
	Connecting short-term, non-credit programs to standard, credit bearing programs through the use of credit for prior learning holds potential.
	To further the continuation of MoSTEM students along a STEM career pathway, the College designed and received funding for a TechHire grant that bridges students from the entry-level MoSTEM program to College credit programs.

**Table 2. State Technical College of Missouri's MoSTEMWINS Stakeholder Engagement**

State Technical College of Missouri MoSTEMWINS Stakeholder Engagement								
<b>Roles &amp; Responsibilities</b>	<b>College Leaders</b>	<b>MoWINS Project Leaders</b>	<b>Faculty</b>	<b>Student Support Staff</b>	<b>Students</b>	<b>Employers</b>	<b>Workforce Investment Board</b>	<b>Other Ed. Partners</b>
Assist with Program Design	High	High	High	Moderate	Low	High	High	High
Connect Graduates to Employment	Moderate	High	High	Moderate	N/A	High	High	High
Identify Industry Workforce Needs	High	High	High	High	Low	High	High	Moderate
Identify Necessary Skills and Competencies	High	High	High	High	Low	High	High	Moderate
Identify, Access, and/or Refer Participants	Moderate	High	High	High	Moderate	High	High	High
Analyze and Interpret Student Outcome Data	High	High	Moderate	Moderate	N/A	N/A	Moderate	N/A
Validate Curriculum	High	Moderate	High	N/A	N/A	Moderate	Moderate	Low
Provide Support Services	Moderate	High	Moderate	High	N/A	Low	High	High
Participate in Curriculum Development	High	High	High	Moderate	N/A	Moderate	Moderate	Low
Provide Financial Support	High	High	N/A	N/A	N/A	N/A	High	Moderate
Provide Intern/Externships or Other Work-Based Learning Activity	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Working to Sustain or Scale Innovations beyond the Grant Period	High	High	High	High	N/A	Moderate	High	High

## Three Rivers Community College

Three River Community College's (TRCC) vision for MSW as stated in their revised logic model is to provide manufacturing skills readiness training for TAA and other displaced workers in their service area.

The College has adapted its initial grant program in response to the closure of a large manufacturing facility in this rural community. To best serve the needs of the 1,100 Trade Act eligible individuals, TRCC has developed a non-credit program. The Fundamentals Industry Readiness Skills Training (FIRST) program is designed to prepare students for entry-level employment in a manufacturing/industrial setting. The program is based upon MSSC, Certificated Production Technician, Maintenance Awareness certificate, but has been modified to meet local needs.

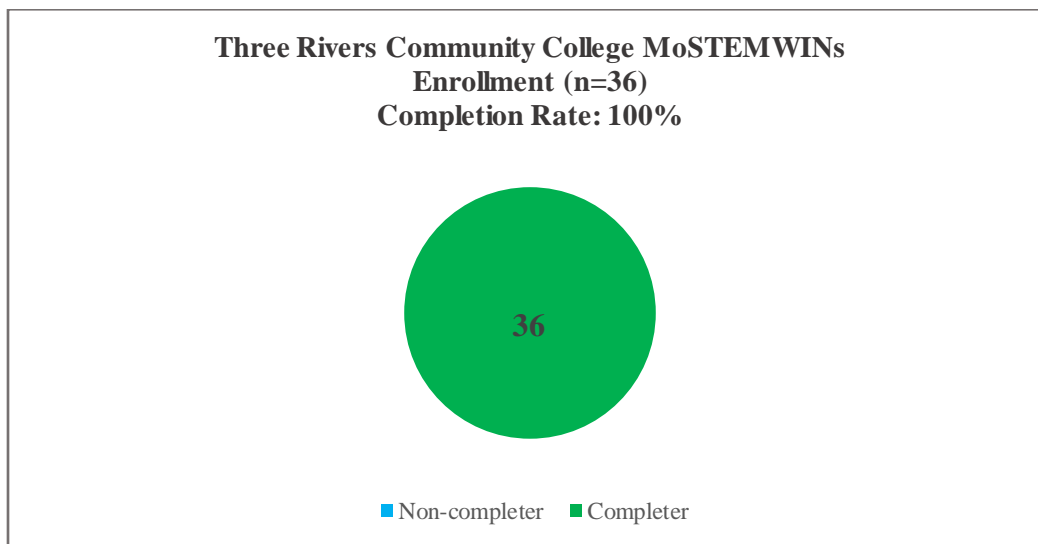
The college intends to use its credit for prior learning process to connect this non-credit FIRST program to AAS industrial program credit programming.

### FIRST Industry Readiness Training Certified Production Technician

*Figure 1. Three Rivers Community College MSW program of study.*

Due to the plant closing and subsequent program restructuring, the College was delayed in its grant start-up. As such the third-party evaluator conducted an abbreviated evaluation of this college and will follow-up with more detailed interviews of students, faculty, and employers after the program has had the opportunity to develop.

Based upon data provided by MCCA as of January 20, 2017, all 36 of the College's grant participants have completed their full program of study as shown in Figure 2.



*Figure 2. Three Rivers Community College MSW enrollment and completion.*

Figure 3 below depicts Three Rivers Community College's self-assessment of implementation of MSW priorities and strategies using this scale:

- Rating of 0 = Not Planned: this activity is not relevant to this college's MSW grant.
- Rating of 1 = Planning but Not Started: this activity is being planned as part of the grant but implementation has not begun.

- Rating of 2 = Advancing Implementation: implementation is occurring on an on-going basis; however, changes or advancements will continue during the grant.
- Rating of 3 = Mature Implementation: implementation has reached the highest level and no additional changes or modifications are expected during the grant.
- Rating of 4 = Sustaining Implementation: the college has made a formal, tangible commitment of resources (budget, people, facilities) to continue this activity beyond the grant.

Table 1 below presents the College reported accomplishments and challenges. Table 2 presents the College's self-assessment of stakeholder engagement in the MoSTEMWINs grant.

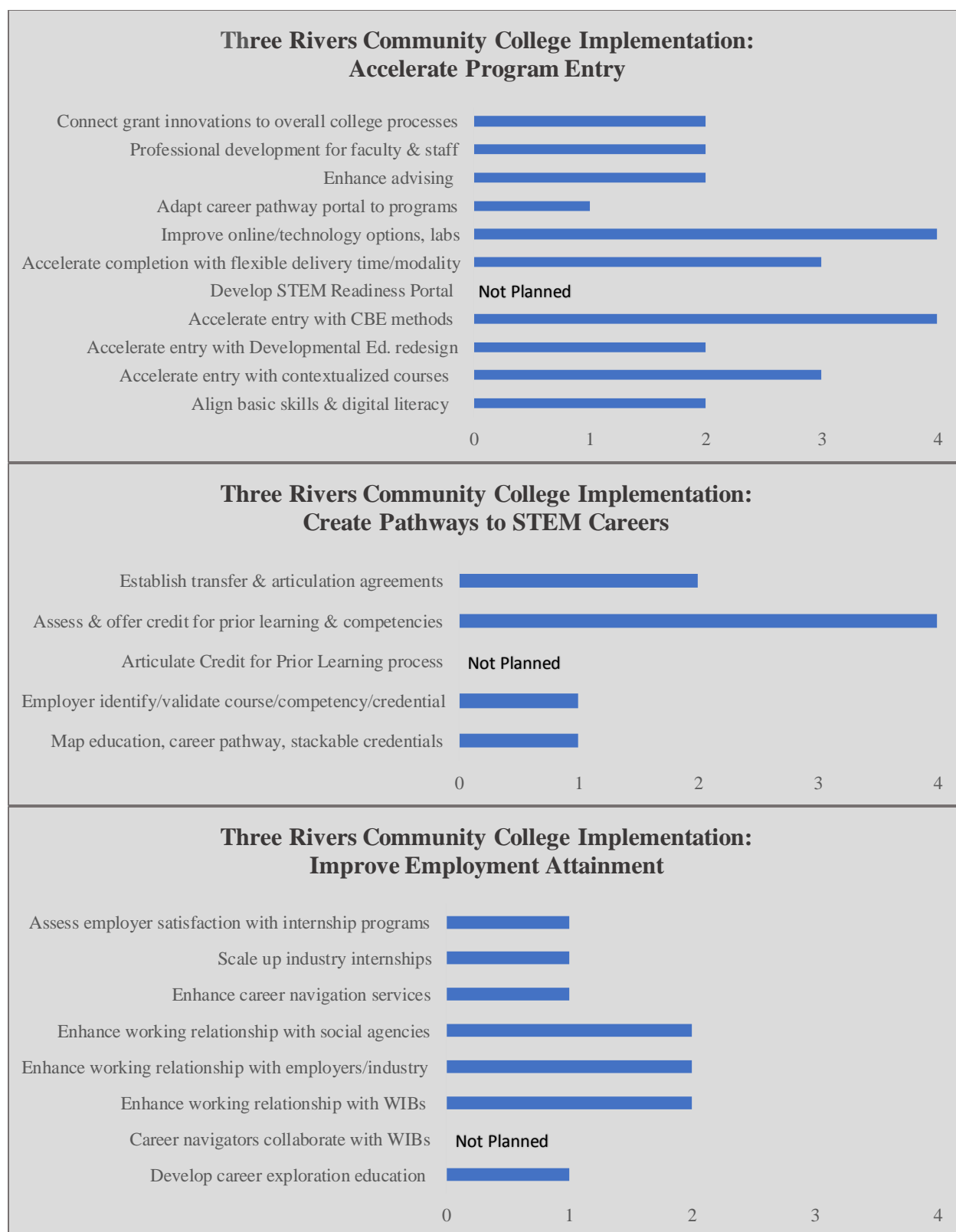


Figure 3. Three Rivers Community College self-assessment of implementation.



**Table 1. Three Rivers Community College's MoSTEMWINs Accomplishments, Challenges**

Accomplishments	Implementation of Competency Based Education is one area that is quickly showing success. We also are certain that TRCC will realize ongoing improvement to the CBE model.
	Rapid-response to the closure of a large manufacturing facility in our region. The layoff of 1,100 employees at a plant near our Sikeston Center required the MoSTEMWINs team to react quickly to the unique needs of countless Trade Act Eligible individuals needing assistance.
	Leveraging resources college-wide has been a unique challenge that has resulted in countless TRCC staff becoming involved in making our MoSTEMWINs project a success.
Challenges	Outreach has been a struggle. Without the ability to "advertise", we've found that even creating a top-of-the-mind awareness to our program offering has been difficult.
	Our MoSTEMWINs project was intended to be creative, unique, groundbreaking. To be faced with full classrooms of Trade Act Eligible participants meant that we had to follow the rules of outside agencies with long-standing policies and procedures.
	Internal approvals at TRCC tend to drag on. Hiring, curriculum approval, purchase approvals, etc. are very slow.

**Table 2. Three Rivers Community College MoSTEMWINs Stakeholder Engagement**

Three Rivers Community College MoSTEMWINs Stakeholder Engagement								
<b>Roles &amp; Responsibilities</b>	College Leaders	MoWINs Project Leaders	Faculty	Student Support Staff	Students	Employers	Workforce Investment Board	Other Ed. Partners
Assist with Program Design	High	High	Moderate	High	Low	Moderate	Moderate	Moderate
Connect Graduates to Employment	Low	Moderate	High	High	N/A	Moderate	Moderate	N/A
Identify Industry Workforce Needs	Moderate	High	High	Low	Low	High	Moderate	Moderate
Identify Necessary Skills and Competencies	Moderate	High	High	Low	Low	High	Moderate	Moderate
Identify, Access, and/or Refer Participants	Low	Low	Moderate	High	N/A	Low	Moderate	Low
Analyze and Interpret Student Outcome Data	Moderate	High	High	High	N/A	Low	Moderate	N/A
Validate Curriculum	Moderate	High	High	Moderate	N/A	Moderate	Low	Low
Provide Support Services	Low	Moderate	High	High	N/A	N/A	High	N/A
Participate in Curriculum Development	Moderate	High	High	Low	N/A	Moderate	Low	Moderate
Provide Financial Support	N/A	N/A	N/A	N/A	N/A	Low	High	N/A
Provide Intern/Externships or Other Work-Based Learning Activity	Moderate	Moderate	Moderate	Moderate	Low	Moderate	Moderate	Low
Working to Sustain or Scale Innovations beyond the Grant Period	High	High	High	Moderate	N/A	Moderate	Moderate	Moderate

## APPENDIX I. MoSTEMWINS Interview Protocol – Fall 2016

**FACULTY INTERVIEW PROTOCOL:** Thank you for meeting with us. We are the Third-Party Evaluators of your college's MoSTEMWINS grant.

Our evaluation of the college's TAACCCT program requires that we understand how the grant is being implemented here at \_\_\_\_\_ college and what you are learning along the way. We are particularly keen to understand the faculty's perspective on the process of adapting curriculum, assessment, instruction, and advising. We are not evaluating your technique or experience. Rather, we are trying to learn more about the innovations of TAACCCT and hopefully learn about faculty and college practices that help improve the student experience.

You have been selected to speak with us today because of your involvement with the grant. Thank you for your candor and taking your time to share your insights with us. The comments you make today will remain anonymous just as they were in the survey. We will summarize your comments and not attribute any remark to an individual who might be identified if we give verbatim results.

We have X time scheduled for this interview, we may need to push ahead so to complete our questions.

- 1) Faculty Background:
  - a) What program do you teach?
  - b) How long have you been teaching at the \_\_\_\_\_ college?
  - c) What is your experience with teaching in an online environment? (Optional)
- 2) Tell us about your experience in adapting your **curriculum**?
  - a) Tell us about working with employers?
    - i) What could have made the experience better?
  - b) How were the competencies developed for your program?
    - i) Are they the same as before?
    - ii) How were employers involved in the development of competencies?
  - c) How confident are you in the quality of your program's competencies, learning outcomes, assignments?
  - d) How easy is it for you to make adaptations to content?
  - e) What are the positives?
  - f) How could it be improved?
- 3) Tell us about your experience with **assessment** as it relates to the MSW grant?
  - a) How confident are you in the quality of assessments designed for your program?
  - b) Were employers engaged in developing assessments?
  - c) What are the positives?
  - d) How could it be improved?
- 4) Tell us about your experience with **instruction** as it relates to the MSW grant?
  - a) How do you know how your students are doing, if they are on track?
    - i) Are students accelerating?
    - ii) Are students completing?
  - b) How effective is your communication with students as compared to non-grant situations?
  - c) How has the student experience altered under MSW?

- d) How have *academic* support services adapted under MSW?
  - e) Tell us how your interactions with students have changed under MSW?
  - f) What are the positives?
  - g) What are the challenges and how could they be overcome?
- 5) Tell us about your experience with **advising** under MSW?
- a) What are the changes in your interactions with students regarding advising?
  - b) Tells us about the systems in place for student advising? Are you involved?
  - c) What are the positives?
  - d) How could it be improved?
- 6) Tell us about the changes in your role as faculty member under MSW.
- a) What are the positive aspects of the changes in your role?
  - b) How have student outcomes been different?
- 7) Tell us about the resources that were and are available to you under MSW?
- a) What would have helped?
  - b) Other
- 8) Wrap-up:
- a) Please contact us if you have anything else to share
  - b) We may contact you to clarify information or ask additional questions.
  - c) Thank you for your time.

**STUDENT INTERVIEW PROTOCOL:** Thank you for meeting with us. We are the Third-Party Evaluators of the \_\_ Community College's MoSTEMWINs Taaccct grant.

Our evaluation of the college's TAACCCT program requires that we understand how the grant is being implemented here at \_\_ college and what you are learning along the way. We are particularly keen to understand students' perspective to learn what is working well and what could be improved. We are not evaluating your performance but we are trying to learn more about the innovations of TAAACCCT and hopefully help improve the student experience.

You have been selected to speak with us today because of your involvement with the grant. Thank you for your candor and taking your time to share your insights with us. The comments you make today will remain anonymous just as they were in the survey. We will summarize your comments and not attribute any remark to an individual who might be identified if we give verbatim results.

We have an X time scheduled for this interview, we may need to push ahead to complete our questions.

1. What is your program of study and where are you in the program?
2. What brought you to enroll in this program at this time?
  - a. How important was finding a job?
  - b. What about this program caused you to enroll?
3. What has your experience been as a student in the POS?
  - a. Successes?
  - b. Challenges?

4. When and how do you interact with faculty and how is it different?
  - a. Can you describe your contact with your instructor?
5. When and how do you interact with advisors and how is it different?
  - a. What was the experience like at recruiting? Enrolling? Helping you stay connected academically? Career exploration/LMI data?
  - b. What sorts of job assistance have you received?
  - c. Have you been introduced to any employers as part of this program?
  - d. How did that come about? (came to class, job event, at employer site, etc.)
  - e. How did that experience affect you?
  - b. Other support service you receive?
6. If a friend asked you about this POS, what would you say would make a successful student? Would you recommend it?
7. What could be improved?
8. Wrap-up:
  - a. Please contact us if you have anything else to share
  - b. We may contact you to clarify information or ask additional questions.
  - c. Thank you for your time.

**LEADERSHIP/EXECUTIVE ADMINISTRATION INTERVIEW PROTOCOL:** Thank you for meeting with us. We are the Third-Party Evaluators of your college's MoSTEMWINs Taaccct grant.

Our evaluation of your college's MSW program requires that we understand how the grant is being implemented here at \_\_\_ college and what you are learning along the way. We are particularly keen to understand college leadership's perspective on what you are seeking to learn from your TAACCCT experiment. We are not evaluating your technique or experience rather, we are trying to learn more about the innovations of TAAACCCT and about college practices that help improve the student experience.

Thank you for your candor and taking your time to share your insights with us. We have X time scheduled for this interview and we may need to push ahead to complete our questions.

- 1) Regarding MSW, what is going well?
- 2) What is the grant team doing to gather and use data to evaluate and improve the programs and strategies associated with the grant?
- 3) If applicable, what are you learning from your innovations regarding and how has the MoWINs experience affected this area:
  - a. Assessment?
  - b. Development education?
  - c. Advising for retention and completion?
  - d. If applicable, any student tracking process or software?
  - e. Employer engagement?

- f. Faculty development?
  - g. Advising for job placement?
  - h. WIB/career center?
- 4) Do you hope to sustain or scale any grant innovations?
    - What data do you need to make those decisions?
  - 5) What are the challenges/barriers?
    - What have you done to address/overcome the challenges?
  - 6) What are you learning about implementation in general and specifically with regard to college processes and organizational culture?
    - How does each group process/manage/reflect on their implementation of each of the grant strategies?
    - How are they learning from one another?
  - 7) Wrap-up:
    - a. Please contact us if you have anything else to share
    - b. We may contact you to clarify information or ask additional questions.

Thank you for your time.

**EMPLOYER INTERVIEW PROTOCOL:** Thank you for meeting with us. We are the Third-Party Evaluators of X College's MoSTEMWINs Taaccct grant.

Our evaluation of X College's MSW program requires that we understand how the grant is affects the college's relationships with employers and what you are learning along the way. We are particularly keen to understand college employers' perspectives on your input into the curriculum and your experience with faculty, students, and completers. We are not evaluating your business or experience rather, we are trying to learn more about the innovations of TAAACCCT and about college practices that help improve the student experience.

Thank you for your candor and taking your time to share your insights with us. We have X time scheduled for this interview and we may need to push ahead to complete our questions.

1. Are you familiar with the MSW at X college? If so, what programs have you been involved with?
2. How has your MSW experience been different from other relationships with this college or other colleges?
3. How has the college engaged you regarding:
  - a. Identification of the KSA necessary for this program?
  - b. Identifying competencies and/or certifications?
  - c. Building/reviewing/validating curriculum?
  - d. Providing clinical, internships, or other work-based learning?
  - e. Visiting the classroom to \_\_\_\_\_?
  - f. Mock interviews?
  - g. Providing instructors?
  - h. Donating space, equipment, supplies?
  - i. Providing incentives to students to complete?
  - j. Hiring completers?

- k. Any other activity?
- 4. What certifications/KSAs are most important to you, hardest to find?
- 5. What has your experience been regarding:
  - a. College's program advisory committee?
  - b. Local industry consortia as it relates to your talent pipeline?
  - c. WIB/career center?
- 6. Do you hope to continue your relationship with the college?
  - a. What data do you need to make those decisions?
- 7. What are the challenges/barriers?
- 8. What have you done to address/overcome the challenges?
- 9. What could the college do to make this better? What should they continue? What should they cease?
- 10. Wrap-up:
- 11. Please contact us if you have anything else to share
- 12. We may contact you to clarify information or ask additional questions.
- 13. Thank you for your time

## Appendix II. MoSTEMWINS Self-Assessment of Implementation

Acknowledgement
*Acknowledgment: This toolkit was adapted from the <i>TAACCCT Implementation Evaluation Toolkit</i> created by the Office of Community College Research and Leadership (OCCRL), University of Illinois at Urbana-Champaign (2012), which is copyrighted by the Board of Trustees of the University of Illinois at Urbana-Champaign.
Summary Questions:
Relevant to grant innovations, what types of professional development have been most useful for your faculty and staff?
Please describe your efforts to connect grant innovations to your College. What are the barriers you face in doing so?
What aspects of your intrusive advising model hold promise for sustainability?
Please describe your college's Competency-Based Education model.
Please describe your progress in developing internships.
How do you know that your MSW programs are meeting industry needs? How do you know whether employers are satisfied with completers?
Implementing MoSTEMWINS Strategies
Level of Implementation Scale:
<b>Planning but not started</b> - this activity is being planned as part of MSW but implementation has not begun.
<b>Advancing implementation:</b> implementation is occurring on an on-going basis; however, changes or advancements will continue during the grant.
<b>Mature implementation:</b> implementation has reached the highest level and no additional changes or modifications are expected during the grant.
<b>Sustaining Implementation:</b> the college has made a formal, tangible commitment of resources (budget, people, facilities) to continue this activity beyond the grant.
<b>Not Planned:</b> this activity is not relevant to this college's MSW grant.
Strategy 1: Accelerate Entry into Career Programs by refining assessment, transforming developmental education, adding support services to meet needs of TAA-eligible/other participants
Align basic skills and digital literacy with occupational courses and programs
Accelerate program entry through contextualized courses
Accelerate program entry through Developmental Education redesign
Accelerate program entry through Competency-based methods
Develop a STEM Readiness Portal for entering students providing assessment, career counseling, academic advising, remediation and orientation to STEM programs
Accelerate program completion through a combination of flexible delivery times and modalities
Improve online and technology-enabled learning options and hands-on labs
Adapt career pathway portal to programs
Enhance advising to participants
Conduct professional development for faculty and staff
Strategy 2: Create Clear Pathways to STEM Careers by expanding access to/developing new stacked and latticed credentials in programs that meet employer needs
Map education and career pathways and stackable credentials
Identify & validate courses, competencies, and credentials with business & industry
Articulate Credit for Prior Learning processes for target programs



Assess and offer credit for prior learning and competencies								
Establish transfer and articulation agreements								
Offer credit for prior learning, noncredit courses, OJT, military experience and other competencies								
Strategy 3: Improve Employment Attainment by working with industry, local WIBs, the state, and community-based organizations to engage, guide and employ participants.								
Develop career exploration education for participants								
Career navigators collaborate with WIBs, working on-site when possible								
Enhance working relationship with WIBs and planning councils to recruit, refer, and help place students								
Enhance working relationship with employers & industry consortia to recruit, refer, & help place students								
Enhance working relationship with social agencies to recruit, refer, and help place students								
Enhance career navigation services								
Scale up industry internships								
Assess employer satisfaction with internship programs; modify as necessary								
<b>Major Accomplishments that your MoSTEMWINS grant has experienced up to the present time:</b>								
<b>Major Challenges that your MoSTEMWINS grant has experienced up to the present time and the actions that have been taken to address these challenges:</b>								
<b>College MoSTEMWINS Stakeholder Engagement</b>								
<b>Roles &amp; Responsibilities</b>	<b>College Leaders</b>	<b>MoWINS Project Leaders</b>	<b>Faculty</b>	<b>Student Support Staff</b>	<b>Students</b>	<b>Employers</b>	<b>Workforce Investment Board</b>	<b>Other Ed. Partners</b>
Assist with Program Design								
Connect Graduates to Employment								
Identify Industry Workforce Needs								
Identify Necessary Skills and Competencies								
Identify, Access, and/or Refer Participants								
Analyze and Interpret Student Outcome Data								
Validate Curriculum								
Provide Support Services								

Participate in Curriculum Development								
Provide Financial Support								
Provide Internship, Externship, Other Work-Based Learning Activity								
Working to Sustain or Scale Innovations beyond the Grant Period								

### Appendix III. MoSTEMWINs Enrollment by Program of Study

Program Name	Credit	Non-credit	Total
Certificate of Specialization in Computer Programming	30	0	30
Certificate of Specialization in IT Project Management	5	0	5
Certified Logistics Technician	13	18	31
Certified Nurse Assistant	0	11	11
Certified Production Technician	31	85	116
Chemical Laboratory Technology	49	0	49
Cisco	0	4	4
Community Health Worker	0	44	44
CompTIA	0	55	55
Computer Concepts	0	145	145
Connector & Conductor	6	0	6
Dental Hygiene	10	0	10
Diagnostic Medical Sonography	9	0	9
Electronics Technology Certificate (ETC)	35	0	35
Health Information Management	7	0	7
Health Professionals Tutoring & Resource Lab (HPTRL)	0	97	97
Industrial Hydraulic Mechanic	6	0	6
Information Technology Help Desk/End-user Support Specialist	23	0	23
Launch Code RebootU	0	25	25
Life Science Lab Assistant	13	0	13
Mechatronics	2	0	2
Medical Assistant	0	108	108
Microsoft	0	3	3
Mobile Hydraulic Mechanic	4	0	4
MoSTEMWINs Portal	0	61	61
MSSC Certified Production Tech	19	0	19
Multi-Skilled Tech/Certified Production Tech (F.I.R.S.T)	0	36	36
Nursing 2nd Year	22	0	22
Nursing LPN 1st Year	21	0	21
Patient Care Technician	0	39	39
Pharmacy Technician	45	0	45
Pneumatic Tech	1	0	1
Precision Machining Technology	15	0	15
Radiologic Technology	15	0	15
Supplemental Instruction for MCC CSIS Credit Students	0	61	61
Transport Training	0	200	200
UP Program	0	52	52
Welding - Level 1 Partial Basic	0	105	105
Welding - Level 2 Full Basic	0	20	20
<b>Total</b>	<b>381</b>	<b>1,169</b>	<b>1,550</b>

## References

Cosgrove and Associates. 2015. *Round 4 MoSTEMWINs Process Evaluation Phase I Summary Report, April 2015*. (EPR #1).

Cosgrove and Associates. 2015. *Baseline Year 1 Implementation Evaluation Summary Report, November 2015*. (EPR#2).

Cosgrove & Associates, Weathers, Barbara. 2014. *MoWINs White Paper Employer Engagement Task Force Report*, <https://www.skillscommons.org/handle/taaccct/3334>

Funnell, S. and Rogers, P. 2011. *Program Theory: Effective Use of Theories of Change and Logic Models*, San Francisco, CA: John Wiley & Sons.

Patton, Michael Q. 2011. *Developmental Evaluation, Applying Complexity Concepts to Enhance Innovation & Use*. Guilford Press. New York.

Wilson, Randall. 2015. *Jobs for the Future: A Resource Guide to Engaging Employers*. <http://www.jff.org/publications/resource-guide-engaging-employers>