2016 I-AM Annual Evaluation Report

Iowa Advanced Manufacturing
Statewide Consortium

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Prepared by

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Iowa Advanced Manufacturing Statewide Consortium

2016 I-AM Evaluation Final Report

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Abbreviations of community college names used in this report.

Community College	**Abbreviation**
Des Moines Area Community College	DMACC
Eastern Iowa Community Colleges	EICC
Hawkeye Community College	HCC
Iowa Central Community College	ICCC
Indian Hills Community College	IHCC
Iowa Lakes Community College	ILCC
Iowa Valley Community College District	IVCCD
Iowa Western Community College	IWCC
Kirkwood Community College	KCC
North Iowa Area Community College	NIACC
Northeast Iowa Community College	NICC
Northwest Iowa Community College	NCC
Southeastern Community College	SCC
Southwestern Community College	SWCC
Western Iowa Tech Community College	WITCC

EXECUTIVE SUMMARY

TAACCCT Program Description & Activities

The Iowa Advanced Manufacturing (I-AM) Consortium, comprised of the 15 Iowa community colleges, was formed in response to a documented shortage of skilled workers in Iowa's advanced manufacturing sector. The formation of the consortium allowed participating community colleges to collaborate on building the training capacity required to meet the state's advanced manufacturing industry demand for highly qualified workers while providing training to Iowans with skills need to engage in Iowa's workforce.

The grant has provided the I-AM Consortium with the opportunity to respond to advanced manufacturing employer demands for skilled workers by developing/expanding the number and types of credentials (e.g., credit/non-credit certificates, diploma, Associate's degree) offered within seven new/expanded signature programs: Welding Technician/Technology, Machining/CNC/Tool and Die, Industrial Maintenance, Industrial Automation, Manufacturing Technician/Technology, Robotics, and Transportation and Logistics (see Figure 1) to students interested in expanding their education and skill set. Additionally, many of these signature programs aligned their curricula with third party certifications (e.g., American Welding Society [AWS], National Institute for Metalworking Skills [NIMS], Certified Production Technician [CPT]) that assess whether students have met the requirements to work in their respective fields enabling them to obtain certifications locally. Providing third party certifications (e.g., AWS, NIMS) in Iowa is notable because many of these were previously available only at locations out of state, presenting potential hardships for students, employees, and employers.

Implementation of the I-AM program has helped enhance student services (e.g., intensive/intrusive advising, career navigation, third party certifications, Credit for Prior Learning), increased visibility of the program through statewide and regional marketing efforts, and increased the number of students participating in the various advanced manufacturing signature programs.

Evaluation Design Summary

A comprehensive evaluation of the I-AM Project required by the U.S. Department of Labor, consisting of an implementation evaluation and an outcomes evaluation, was led by the Research Institute for Studies in Education (RISE) at Iowa State University. The a-e-I-o-u Approach to Program Evaluation (Kemis and Walker, 2000) was utilized for the implementation evaluation of the I-AM Project. This evaluation approach provides a framework for organizing the following key evaluation questions required by the U.S. DOL TAACCCT program:

- How was the particular curriculum selected, used, or created?
- How were programs and program design improved or expanded using grant funds?

- Did the grantees conduct an in-depth assessment of participants' abilities, skills, and interests to select participants into the grant program?
- What contributions did each of the partners make towards program design, curriculum development, recruitment, training, placement, program management, leveraging resources, commitment to program sustainability?

This approach examines inputs (actions and activities designed to achieve specific goals), intermediate outcomes (immediate and short-term effects), and ultimate outcomes (long-term effects or changes). In assessing the operational strengths and challenges of the project during and following implementation, not only did we consider overall effectiveness, but we also considered broader impacts, contextual effects related to the organization and project environment, and unexpected results. In particular, we examined and evaluated implementation activities, key stakeholders' (Project Leads, Faculty, Career Navigators/Coaches/Advisors, students, Employer Partners, committee members, and College Leadership) perceptions regarding the I-AM program, and tracking of milestone completion by participating community colleges. Surveys were developed to assess implementation activities and key stakeholders' perceptions while tracking of milestone completion was completing by examining project records (e.g., quarterly reports, phone interviews).

To determine the impact of the I-AM welding signature program, examination of participant outcomes utilized a quasi-experimental research design approach which included comparison of two cohorts (a treatment group and a control group). For the purpose of this analysis the treatment group included students that enrolled in an I-AM welding signature program between Fall 2013 and Spring 2014, and the control group included students that enrolled in welding programs prior to the implementation of the I-AM welding signature programs between Fall 2010 and Spring 2012.

Propensity Score Matching, a statistical analysis described by Rosenbaum & Rubin, 1983, was used to "match" participants in the treatment and control groups based on similar characteristics in order to reduce selection bias that may results from possible confounding variables such as age, sex, race, or wages prior to the specified data collection period. Descriptive, inferential, and probability (e.g., Bayes' Theorem) statistics were conducted on the treatment and control groups.

Educational and wage data came from three sources: the I-AM participant database, the Iowa Department of Education which provided National Student Clearinghouse data along with other student educational data, and Iowa Workforce Development. While the quality of the data provided was good, limitations included missing data (e.g., some participants worked out of state, therefore wage data was not available) and the time period selected for analysis (i.e., time constraints in obtaining data necessitated using data that was collected before full impact of the program could be experienced by students).

Outcomes research questions included the following:

- Are there significant differences between students enrolled in an I-AM funded welding program (treatment group) and student who enrolled in a welding program prior to the start of the I-AM program (control group) in each of the following areas at Time 2?
    - Quarterly wages
    - Changes in quarterly wages within groups
    - Jobs (e.g., placement, or number of jobs held)

Implementation Findings

Stakeholder surveys were developed and progress in completing milestones was tracked in order to evaluate the implementation of the I-AM Project across all 15 Iowa community colleges. Stakeholders included students, a Project Lead at each community college, marketing staff, Employer Partners, Faculty, I-AM committee members, and College Leadership. Overall findings of the implementation evaluation are:

- The I-AM program implemented all of the goals of the grant with fidelity with all milestones and deliverables completed or met by the end of the grant. It is important to note that the I-AM program exceeded its expectations with inclusion of all 15 community colleges in the welding signature program. In addition, while eight Accredited Testing Facilities (ATFs) were originally included in the grant, two additional ATFs funded by community colleges were added for a total of ten ATFs.
- Community colleges were able to build or expand capacity of their advancing manufacturing programs by hiring and training faculty and Career Coachers/Navigators/Success Coaches, purchasing equipment that met industry standards, providing enhanced student services (e.g., NCRC testing, KeyTrain/Career Ready 101), and with the implementation of the Intrusive Advising Model/Approach created by the I-AM Advising and Enrollment Committee.
- Multiple committees (e.g., Curriculum, Advising and Enrollment, Marketing, Credit for Prior Learning), comprised of members representing each of the participating community colleges, were set up to work on and address each of milestones and deliverables identified in the grant. Examples of their work include:
    - development of an Intrusive Advising Model/Approach,
    - development of a statewide welding curriculum consisting of fourteen courses aligned with American Welding Society's (AWS) School Excelling through National Skill Standard Education (SENSE) Level I, and
    - reviewed and updated Credit for Prior Learning policies and practices.

- Grant funds were used to market the I-AM programs at a regional as well as statewide level allowing community college to reach potential students that may not be familiar with the I-AM programs and advanced manufacturing. The statewide marketing campaign evolved into the Elevate Iowa marketing campaign that will continue to function once the grant ends on September 30, 2016.
- The statewide, Elevate Iowa, and regional marketing campaigns helped to increase awareness of and change perceptions about the advanced manufacturing field.
- Employer Partners contributed to the success of the I-AM program in multiple ways. They provided students with internships, tours of their facilities, resume review, mock interviews, and participation at career fairs. They participated in regional and local sector and advisory boards where they helped by providing feedback to the community colleges regarding their curriculum.
- Employer Partners provide feedback to community colleges about their expectations from students in terms of abilities and in turn, community colleges work with partners to accommodate their needs. They contribute by referring their employees or unsuccessful advanced manufacturing job applicants to the I-AM program for training.
- Strengths of the program included:
    - Exemplary guidance and facilitation was provided by the DMACC Project Team in navigating the requirements of the grant and implementation of the signature programs.
    - Collaborative efforts between project leaders at Des Moines Area Community College (the lead institution) and participating community colleges. Participating community colleges were committed to ensuring the success of the program.
    - Communication within and between community colleges was excellent. Opportunities were provided for all involved (Faculty, Project Leads, College Leadership) to be involved in all aspects of the implementation (e.g., development of curriculum, hiring of staff, purchasing equipment).
    - Support of I-AM program by College Leadership.
- I-AM signature programs are largely sustainable after the grant ends on September 30, 2016. However, in some cases, funding to maintain Career Navigators/Success Coaches may not be available, therefore these positions may be reconfigured as needed.

Participant Impacts & Outcomes

Summary of Participant Outcomes for the I-AM Project as of August 1, 2016

Participant Outcome	Goal	Actual Outcomes	% of Goal Met
1. Unique Participants Served/Enrollees	2,728	3,348	123%
1a. Unique participants residing in Iowa		3,021	
2. Total Number of Participants Who Have Completed a Grant-Funded Program of Study	1,676	1,876	112%
2a. Total Number of Grant-Funded Program of Study Completers who are Incumbent Workers	--	1,089	--
3. Total Number Still Retained in Grant Funded Programs of Study	851	455	53%
4. Total Number Retained in Other Education Programs	--	237	--
5. Total Number of Credit Hours Completed	--	55,986	--
5a. Total Number of Students Completing Credit Hours	2,382	1,982	83%
6. Total Number of Earned Credentials (Aggregate across all enrollees)	1,961	2,664	136%
6a. Total Number of Students Earning Certificates-Less than One Year	--	1,278	--
6b. Total Number of Students Earning Certificates-More than One Year	--	655	--
6c. Total Number of Students Earning Degrees	--	222	--
6d. Total Number of Students Earning at least one college-issued credential and/or third party certification		2,145	
7. Total Number Pursuing Further Education After Program of Study Completion	292	550	188%
8. Total Number Employed After Program of Study Completion	1,478	428	29%
9. Total Number Retained in Employment After Program of Study Completion	1,333	327	25%
10. Total Number of Those Employed at Enrollment Who Receive a Wage Increase Post-Enrollment	899	1,537	171%

- I-AM Welding participants in the treatment and control groups from 13 community colleges were matched on similar characteristics (e.g., age, race, wages prior to enrollment) to reduce selection bias using Propensity Score Matching.
- Results of t-test analysis showed that participants in the treatment group were more likely than the participants in the control group to earn at least one college-issued certificate, earn more certificates, earn a diploma, earn a higher welding award, and earn more welding awards.
- While no significant differences were found in the number of jobs held at Time 1, participants in the treatment group were more likely to hold a job at Time 2 than the control group.
- Reported mean and median wages at Time 1 were not significantly different between treatment and control group participants, however, at Time 2, participants in the treatment group (median wage at Time 2 = $3,312.53) earned significantly more than the control group (median wage at Time 2 = $2,157.86).

- Results of Bayes' Theorem analysis predicts that treatment group participants that attained a diploma or certificate in an I-AM welding program were 55-56% more likely to have more than $5,000 in reported quarterly wages.

Conclusions

- *Collaborative Efforts*. A key to the success of the I-AM Consortium in developing/expanding its seven signature programs was the collaborative efforts between the project leaders at Des Moines Area Community College (lead institution) and each participating community college to develop and implement the goals and objectives of the grant. These collaborative efforts are historically significant because it is the first time that all 15 Iowa community colleges have come together to accomplish an undertaking of this magnitude with the goal of benefitting students, community colleges, Employer Partners, and other key stakeholders in the state.
- *Excellent Leadership*. Notably, collaborative efforts between the community colleges were enhanced by the exemplary guidance and facilitation provided by the DMACC Project Team in navigating through the requirements of the grant and in the implementation of the I-AM program. Lead team members were actively involved in the program, in constant contact with each participating community college, and were very knowledgeable about all aspects related to the I-AM program.
- An unexpected outcome of the I-AM program was that each of the 15 community colleges *chose* to align their welding curriculum to the statewide welding curriculum (developed by the welding subcommittee) and to AWS SENSE Level I (a set of guidelines and specifications for schools to use in training welders). This particular outcome is notable for several reasons; one reason is that it was not originally identified as a grant deliverable and resulted from the collaboration between community colleges and the success of the welding program; and the second reason is because the alignment provides students with the ability to start their welding program at one community college and then easily finish their program at another community college.
- The I-AM Project accomplished all of its goals:
    - Advanced manufacturing curricula at each community college were aligned to third party certifications and industry standards.
    - Credit for Prior Learning policies and practices at each community college were updated.
    - Ten Accredited Testing Facilities (ATFs) were set up across the state to offer AWS certification; eight were funded by the grant, two were funded by the community college.

- More Employer Partners are contributing to advanced manufacturing programs than before the start of the project by providing opportunities to students such as internships, tours of their facilities, career fairs).
- The introduction of the Career Navigators/Success Coaches has impacted students positively by helping the students keep on track to complete their college issued award. They have been helpful in providing guidance to students regarding NCRC, Credit for Prior Learning, Third Party Certification, and Career Pathways.

The following report describes the evaluation activities conducted during the four year grant, including developing multiple survey instruments and conducting surveys with various stakeholders, tracking milestone progression at the 15 community colleges, and conducting an outcomes evaluation for the credit welding signature programs. This report discusses survey results and other reports, project accomplishments and challenges, deliverables, and an outcomes evaluation.

INTRODUCTION

The Iowa Advanced Manufacturing (I-AM) Consortium, comprised of the 15 Iowa community colleges, was formed in response to a documented shortage of skilled workers in Iowa's advanced manufacturing sector. The formation of the consortium allowed participating community colleges to collaborate on building the training capacity required to meet the state's advanced manufacturing industry demand for highly qualified workers while providing training to Iowans with skills needed to engage in Iowa's workforce.

The state of Iowa has been impacted by foreign trade since 2007. Over 8,500 Trade Adjustment Assistance (TAA) certified jobs have been lost within the state as a result of foreign competition and jobs moving outside of the United States (Public Citizen, 2016). In particular, the manufacturing sector in Iowa has borne the brunt of the impact, accounting for 73% (~6,200 jobs) of these job losses.

In 2012, the Iowa Workforce Development (IWD) reported discrepancies between the number of jobs available in Iowa and the worker skill sets of the workforce (Iowa Workforce Development, 2012). IWD found that while half (50%) of all jobs in Iowa were classified as middle skill jobs (i.e., jobs that require workers to have education beyond a high school degree [e.g., certificate or Associate's Degree] but less than a four-year degree) only 33% of the workforce was qualified for those middle skill jobs. In contrast, 18% of jobs available in Iowa were classified as low-skilled while 38% of workforce was considered to be low-skilled (Iowa Workforce Development, 2012).

In October, 2012, the I-AM Consortium was awarded a four-year grant totaling $12,951,165.00 from the U.S. Department of Labor Trade Adjustment Assistance Community College Career Training (TAACCCT) Grant Program whose mission is to provide community colleges and other eligible institutions of higher education with funds to develop, expand, and improve education and career training programs in order to prepare program participants for employment at high wage and high skill occupations.

The grant has provided the I-AM Consortium with the opportunity to respond to advanced manufacturing employer demands for skilled workers by developing/expanding the number and types of credentials (e.g., credit/non-credit certificates, diploma, Associate's degree) offered within seven new/expanded signature programs: Welding Technician/Technology, Machining/CNC/Tool and Die, Industrial Maintenance, Industrial Automation, Manufacturing Technician/Technology, Robotics, and Transportation and Logistics (see Figure 1) to students interested in expanding their education and skill set. Additionally, many of these signature programs aligned their curricula with third party certifications (e.g., American Welding Society [AWS], National Institute for Metalworking Skills [NIMS], Certified Production Technician [CPT]) which assess whether students have met the requirements (e.g., is knowledgeable about the respective field, understands job standards, safety requirements) to work in their respective

fields enabling them to obtain certifications locally. Providing third party certifications (e.g., AWS, NIMS) in Iowa is notable because many of these were previously available only at locations out of state, presenting potential hardships for students, employees, and employers.

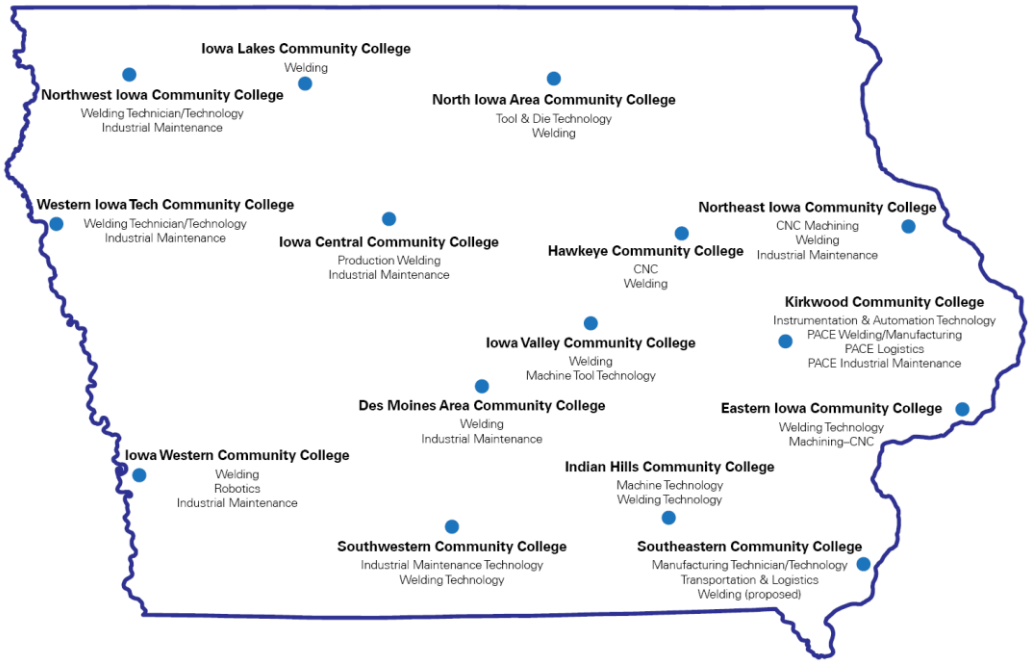

Figure 1. Map of Signature Programs at Iowa Community Colleges.

Formation of the I-AM Consortium has also led to development/expansion of employer partner relationships such as the Iowa Workforce Development (IWD) agency which administers the TAA programs for the state. These partnerships have led to joint marketing efforts, engagement of employers to support career pathways (e.g., serving on regional manufacturing sector boards) as well as life-long learning opportunities.

Implementation of the I-AM program has helped enhance student services (e.g., intensive/intrusive advising, career navigation, third party certifications, Credit for Prior Learning), increased visibility of the program through statewide and regional marketing efforts, and increased the number of students participating in the various advanced manufacturing signature programs.

IMPLEMENTATION OF THE I-AM PROGRAM

Collaborative Efforts: A Key to Success of the I-AM Project

A key to the success of the I-AM Consortium in developing/expanding its seven signature programs has been the collaborative efforts between the project leaders at Des Moines Area Community College (DMACC, lead institution), and each participating community college to develop and implement the goals and objectives of the grant. These collaborative efforts are significant because it is the first time that *all* 15 Iowa community colleges have come together to accomplish an undertaking of this magnitude with the goal of benefiting students, community colleges, Employer Partners, and other key stakeholders in the state.

The importance of good communication between the community colleges was highly rated by community college Project Leads (see Project Leads Fall 2014 survey, Project Leads Spring 2015 survey, and Project Leads Spring 2016 survey). As such, great efforts were taken by the consortium to ensure that all goals/priorities/strategies/objectives were met within the time specified in the grant. A Microsoft SharePoint, a browser-based application, was created for the purpose of sharing documents (e.g., quarterly reports, meeting notes, calendars, and policies), resources, as well as providing a secure portal for uploading and maintaining a participant database by community college.

I-AM Committees and Workshops

To ensure the success of the I-AM Project, members from each of the community colleges joined and actively participated in committees formed to address the goals and priorities specified in the grant. In addition, the lead project team organized workshops to assist community colleges meet their individual goals and objectives as well.

Credit for Prior Learning (CPL) Committee. The committee along with Council for Adult and Experiential Learning (CAEL) made recommendations with regards to aligning Prior Learning Assessment (PLA) policies and practices in order to increase PLA options available to students across the state. Recommendations include: utilization of consistent assessment tools allowing for consistent credit given across the state; inclusion of PLA methodology in institutional policies; and determining how PLA can be used in advanced manufacturing programs (e.g., identification of tools/assessments). The committee was used as a means to share best practices as well as to learn from each other.

Curriculum Committee. The curriculum committee was tasked with auditing and aligning curriculum, certifying instructors, updating training facilities, creating/updating online and blended options, creating/updating a shared core curriculum, creating/updating career pathways, and an ongoing review of the curriculum. This committee was also used as a means to determine

the third-party certifications for each signature program students or instructors could take and was used to determine stacked/latticed curriculum. The curriculum committee also contained the welding subcommittee.

Welding Subcommittee. The welding subcommittee was a specialized subset of the curriculum committee tasked with creating a statewide welding curriculum that could be used at each community college. This subcommittee worked on aligning the welding curriculum at each community college to a statewide welding curriculum and to AWS Schools Excelling through National Skills Education (SENSE) Level I (a set of guidelines and specifications for schools to use in training welders).

Advising and Enrollment Committee. The Advising and Enrollment Committee was tasked with the development of the consortium Intrusive Advising Model/Approach to be used for tracking, advising, matching participants to a program of study and providing education to participants about career pathways. The Intrusive Advising Model/Approach is used by Career Navigators, Success Coaches, or Advisors to help students determine the best program for them, help retain those students in their selected program by having frequent meetings, and help those students plan for a career after the completion of their program.

Marketing Committee. The marketing committee was tasked with the creation of a statewide marketing plan (Elevate Iowa), collaboration with regional marketing plans, and the creation of an employment and career website. Members of the marketing committee met regularly to discuss the statewide marketing plan, their regional marketing plans, and how to use the marketing money allocated to them by the I-AM Consortium. This committee was led by the statewide marketing coordinator housed with the Lead Project Team at Des Moines Area Community College. The statewide marketing coordinator provided information to community colleges concerning Creative Commons and Department of Labor requirements for the grant money, among many other resources. The statewide marketing coordinator was also in charge of the creation of Advanced Manufacturing videos for each of the community colleges and for the overall I-AM project. These videos can be used to show prospective students and employers exactly what Advanced Manufacturing is and what the community college offers.

NCRC Committee. This committee was tasked with making recommendations for incorporating various certifications such as the National Career Readiness Certificate (NCRC) that assesses/certifies that participants have essential math and reading skills needed to be successful in the workforce into the curriculum. The committee also examined the use of KeyTrain/Career Ready 101 for remediation purposes in mathematics, technology, and writing, among other areas which in turn could be used to prepare students to take the NCRC.

Articulations Committee. This committee was formed to strengthen articulation from AAS to BAS at the University of Iowa. Unfortunately, the University of Iowa was not interested in development of the articulation resulting in cancellation of the goals and disbanding of the committee.

Digital Literacy Committee. The digital literacy committee did an audit of the numbering system and available courses at each community colleges for the courses in the advanced manufacturing

programs. This audit provided valuable information so a transcripting process between the community colleges could be more easily accomplished.

Workshops. The statewide Project Lead Team provided various workshops for community colleges to assist them in meeting goals, ensuring alignment between their respective community college and the other participating community colleges. Workshops topics included: Creative Commons licensing, advisor training, CPL portfolio training, and CAEL.

I-AM Signature Programs

Targeted advanced manufacturing programs across the 15 community colleges include: Welding Technician/Technology, Machining/CNC/Tool and Die, Industrial Maintenance, Industrial Automation, Manufacturing Technology, Robotics, and Transportation and Logistics. The following is a description of the signature programs offered by the participating I-AM consortium community colleges.

Welding Technician/Technology

A critical need exists for American Welding Society (AWS) certified welders in Iowa and the need is expected to grow considerably more in the next several years. According to the Bureau of Labor Statistics (2015), while the welding industry is expected to grow by 4% (a slower rate than the national average) and many job opportunities continue to exist. In response to this need, 13 of the 15 Iowa community colleges agreed to include welding as one of the signature programs offered on their campuses. Grant modifications made soon after the start of the program allowed the remaining two community colleges to add welding to the signature programs.

Accredited Testing Facilities (ATFs). ATFs meet a critical industry-identified need for AWS certified workers, as well as address the gap between jobs that require middle skills and the number of workers that have these skills. Prior to the start of the grant, individuals seeking AWS certification had to travel to Accredited Testing Facilities (ATFs) outside of Iowa in order to be tested. One goal of the I-AM Project was to establish eight ATFs across the state of Iowa. By the end of the final fiscal year, ten ATFs were established in the state. The two additional ATFs involved one community college that set up a second ATF and another community college that decided that they would like to have one on their campus. The two additional ATFs were established without grant funding. With the ten ATFs in the state, most I-AM welding participants seeking to become AWS certified are within a one-hour drive of a facility (see Table 1 for location of ATFs). They are also open to the public and allow any welder not currently certified to take the test and become certified. Importantly, the grant funded programs are now considered to be self-sustaining.

Table 1.
Location of I-AM ATFs.

Community College	Grant-Funded	Self-Funded
Des Moines Area Community College	X	
Eastern Iowa Community Colleges	X	X*
Indian Hills Community College	X	
Iowa Central Community College	X	
Iowa Lakes Community College	X	
Iowa Valley Community College District	X	
Kirkwood Community College	X	
Western Iowa Tech Community College	X	
Southeastern Community College		X*

AWS SENSE Level 1. Participating community colleges had the option of implementing the consortium developed SENSE Level I aligned courses. However, as the implementation of the welding program progressed, an unexpected outcome was that all of the community colleges chose to align their welding curriculum to the statewide welding curriculum and to AWS Schools Excelling through National Skills Education (SENSE) Level I (a set of guidelines and specifications for schools to use in training welders). This particular outcome is notable for several reasons; one reason is that it was not originally identified as a grant deliverable and resulted from the collaboration between community colleges and the success of the welding program; and the second reason is because the alignment provides students with the ability to start their welding program at one community college and then easily finish their program at another community college.

Most of the community colleges have implemented all or some of these fourteen courses and several community colleges have created or restricted their welding programs to meet local industry needs. While the alignment process has been completed, the welding subcommittee continues to meet regarding updates and discuss problems identified when it was implemented in a classroom setting. Because of the collaborative efforts, I-AM community colleges now offer more welding Associates' degrees, diplomas, certificates, and non-credit certificates throughout the state (see Table 2).

By the end of the final year of the grant, 1,755 unique participants have taken part in a Welding Technician/Technology signature program. Of these participants, 1,579 resided in Iowa (see Figure 2) earning a number of third party certifications and college issued credentials (see Figure 3).

Table 2.
Welding Program Credentials Offered by Iowa Community Colleges, Fiscal Year 4.

Community College	Credentials Offered by Welding Program			
	Associate's Degree	**Diploma**	**Certificate**	**Non-Credit Certificate**
DMACC	• Advanced Manufacturing	• Welding	• Blueprint Reading • GMAW • Gas Tungsten Arc • Advanced GMAW • Production MIG • SMAW • Advanced SMAW • Thermal Cutting	• MIG Production
EICC	• Welding AAS	• Welding	• Basic • Production • Structural	
HCC		• Welding	• Welding	• Production Welding
ICCC		• Welding	• Welding	• Beginning Welding • Blueprint Reading for Welders • Fabrication, Layout, and Estimation • GMAW
IHCC	• Welding AAS	• Welding		• Basic Production Welding • GMAW Production Welding • GTAW Production Welding • GMAW/GTAW Production Welding
ILCC		• Welding	• Welding	• Performance Welding
IVCCD		• Manufacturing Welding	• Manufacturing Welding • Manufacturing Welding – Construction	

Table 2.
Welding Program Credentials Offered by Iowa Community Colleges, Fiscal Year 4.

Community College	Credentials Offered by Welding Program			
	Associate's Degree	**Diploma**	**Certificate**	**Non-Credit Certificate**
IWCC				• Combination Welding
KCC	• Welding	• Welding		• PACE Welding Certificate
NIACC		• Welding	• Welding	• Production Welding
NICC		• Welding		• Entry Level GMAW Welding Pathway Certificate • Basic Welding Pathway Certificate
NCC	• Production Welding AAS	• Production Welding	• Production Welding	
SCC				• Production Welding
SWCC	• Welding Technology	• Welding Technology	• Welding Technology	• Industrial Welding
WITCC		• Industrial Welding • Structural Welding	• Production Welding • Advanced Production Welding • Qualified Welding	• Customized Welding

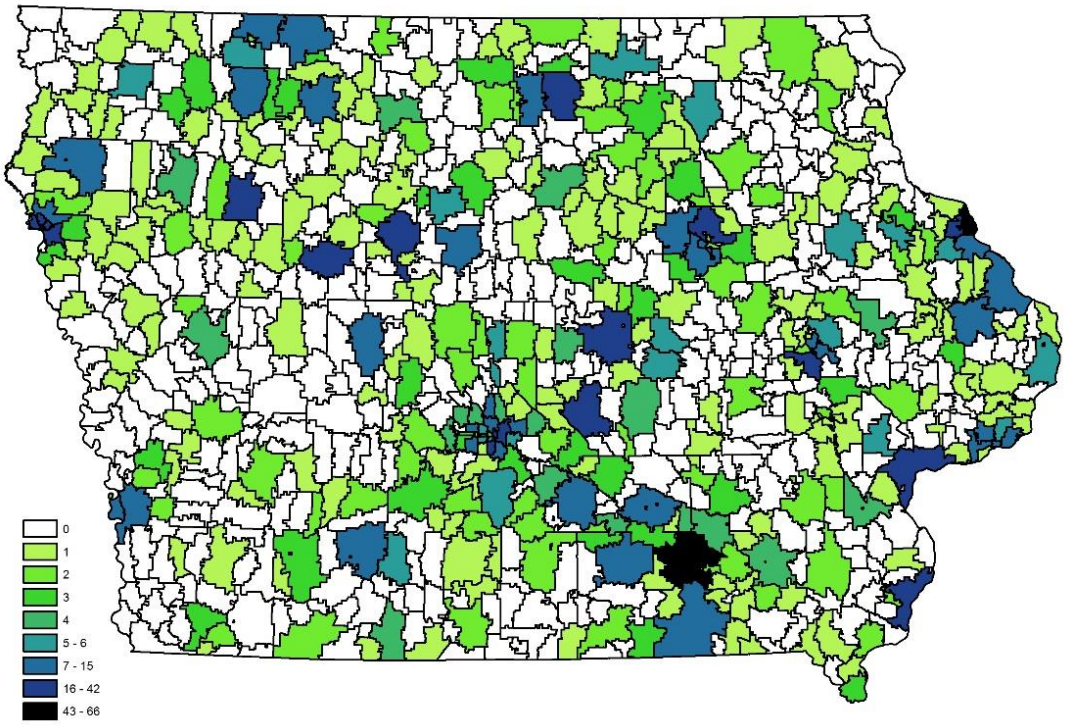

Figure 2. Participants of the Welding Technician/Technology Program by Iowa Zip Code.

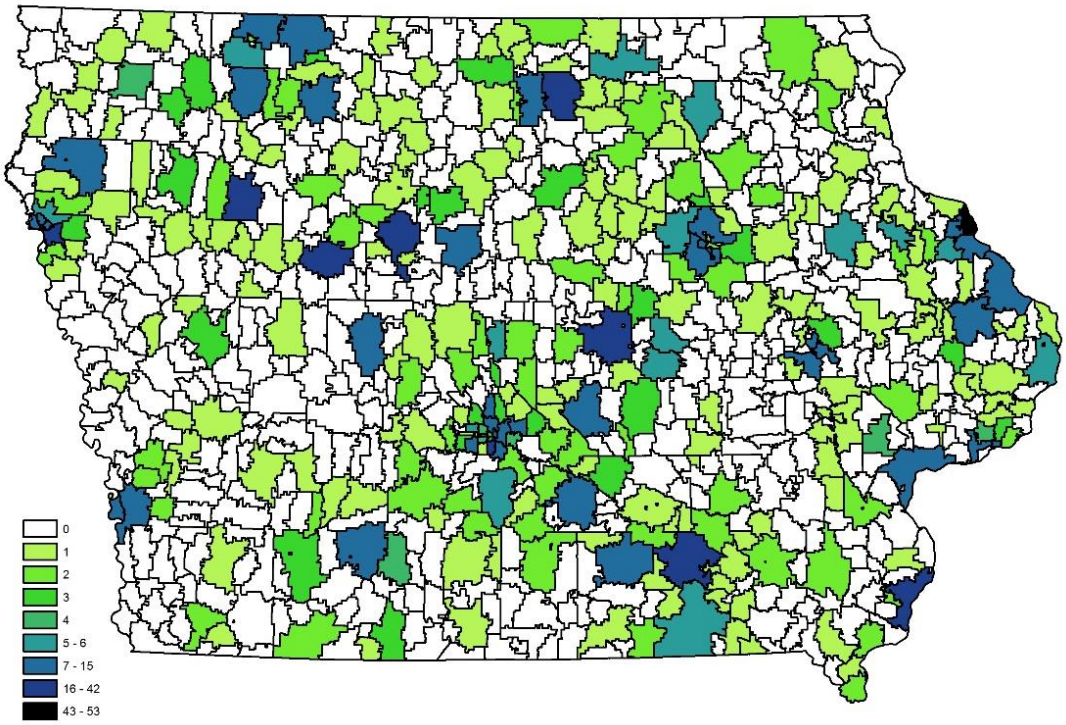

Figure 3. Participants of the Welding Technician/Technology Program that Earned at Least One Third Party Certification or College Issued Credential by Iowa Zip Code.

Machining/CNC/Tool and Die

The Machining/CNC/Tool and Die signature program is offered by seven of the 15 participating community colleges. These I-AM Machining/CNC/Tool and Die programs are geared to prepare students to operate conventionally controlled or computer numerical controlled (CNC) tools in the manufacturing of precision metal parts and products. The specific focus of the program at each community college can vary between machining, computer numerical control (CNC), or tool and die.

Two Iowa community colleges have been accredited by the National Institute for Metalworking Skills, Inc. (NIMS) for their Machining/CNC/Tool and Die programs. Indian Hills Community College (IHCC) has NIMS accreditation in Machining Level 1 for the cycle period between November 2014 and November 2019. While not one of the I-AM signature programs, Kirkwood Community College (KCC) has NIMS accreditations for Machining Levels 1 and 2 for the cycle period between September 2014 and September 2019.

See Table 3 for a list of I-AM community colleges offering Associate's Degree, diplomas, certificates, and non-credit certificates in Machining/CNC/Tool and Die.

By the end of the final year of the grant, 616 unique participants have taken part in a Machining/CNC/Tool and Die signature program. Of these participants, 564 resided in Iowa (see Figure 4) earning a number of third party certifications and college issued credentials (see Figure 5).

Industrial Maintenance

The Industrial Maintenance signature program is also one of the three programs most widely offered by Iowa community colleges at seven of the 15. Industrial Maintenance is a broad term used to describe programs that prepare students to install/repair industrial machinery/equipment using basic skills in welding, fabrication, lean manufacturing, blueprint reading, and preventive and predictive maintenance. The focus of the Industrial Maintenance program, as well as the nomenclature of the program (e.g., Industrial Electro-Mechanical Technology, Industrial Technology), varies across community colleges offering Industrial Maintenance programs. The variety in nomenclature may present difficulty for prospective students when searching for information about Industrial Maintenance programs on community college websites.

A list of I-AM community colleges offering Associate's Degree, diplomas, certificates, and non-credit certificates in Industrial Maintenance can be found in Table 4.

By the end of the final year of the grant, 391 unique participants have taken part in an Industrial Maintenance signature program. Of these participants, 373 resided in Iowa (see Figure 6) earning a number of third party certifications and college issued credentials (see Figure 7).

Table 3.
Machining/CNC/Tool & Die Credential Programs Offered by Iowa Community Colleges, Fiscal Year 4.

Community College	Credentials Offered			
	Associate's Degree	**Diploma**	**Certificate**	**Non-Credit Certificate**
EICC	• CNC Machining AAS		• CNC Machining Programming • Manual Machining	
HCC	• CNC AAS	• CNC	• CNC	• CNC
IHCC	• Machine Technology AAS	• Machine Technology		
IVCCD	• Machine Tool Technology AAS	• Machine Tool Technology		
NIACC	• Tool & Die Technology AAS	• General Machinist		• Basic Machining • CNC Operator
NICC		• CNC		• Computer Numerical Control Pathway Certificate
NCC	• Design Technology AAS	• Design Technology		

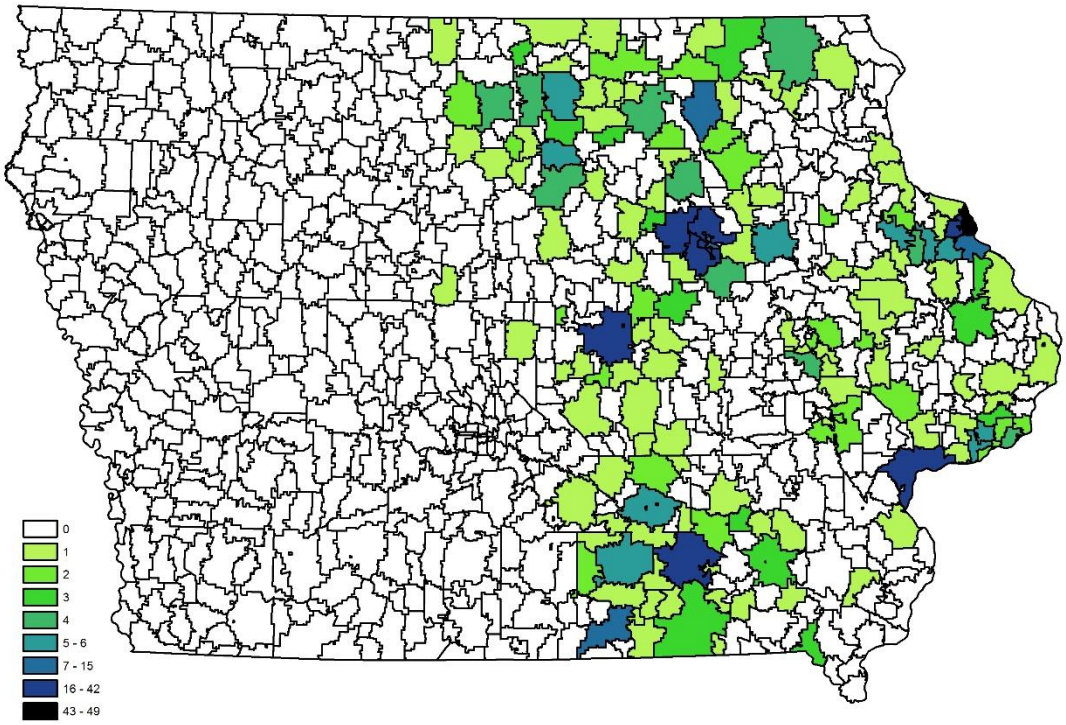

Figure 4. Participants of the Machining/CNC/Tool & Die Program by Iowa Zip Code.

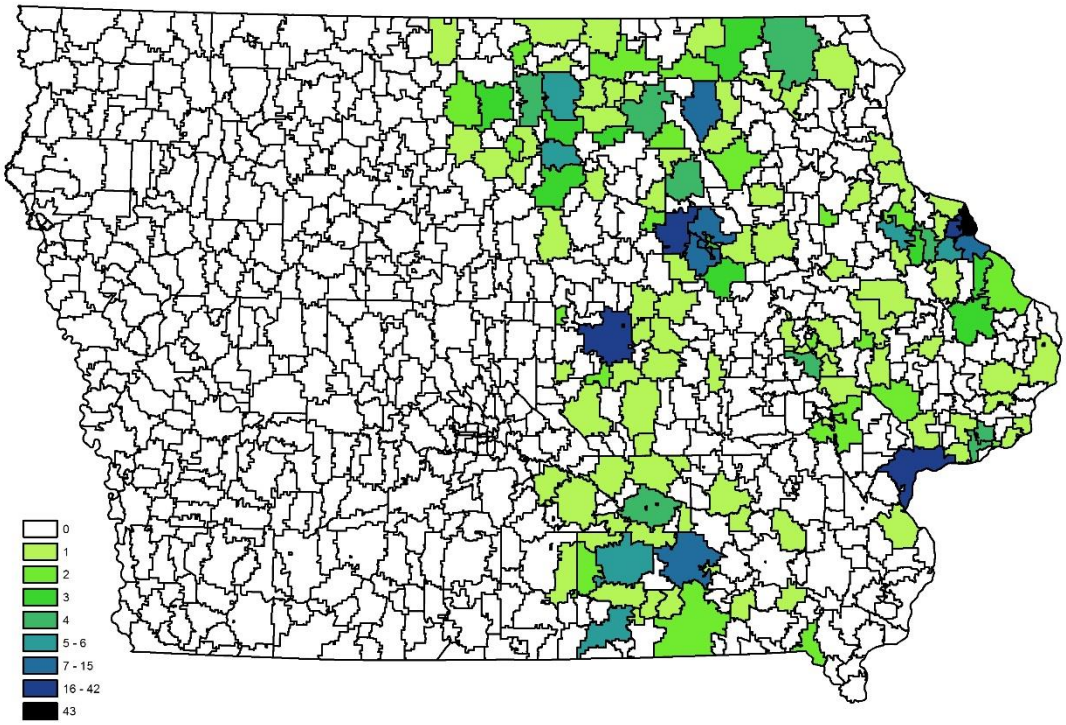

Figure 5. Participants of the Machining/CNC/Tool & Die Program that Earned at Least One Third Party Certification or College Issued Credential by Iowa Zip Code.

Table 4.

Industrial Maintenance Credential Programs Offered by Iowa Community Colleges, Fiscal Year 4.

Community College	Credentials Offered			
	Associate's Degree	**Diploma**	**Certificate**	**Non-Credit Certificate**
DMACC	• Applied Engineering Technology Electromechanical • Applied Engineering Technology - Wind	• Applied Engineering Technology	• Applied Engineering Technology Electromechanical	
ICCC		• Industrial Mechanics		• Industrial Maintenance
IWCC				• Manufacturing Production Technician
KCC				• PACE Industrial Maintenance
NICC	• Industrial Maintenance	• Industrial Maintenance		• Industrial Maintenance Career Pathway Certificate
SWCC	• Industrial Maintenance Technology AAS	• Industrial Maintenance Technology	• Industrial Maintenance Technology	
WITCC		• Electromechanical Technician	• Electrical Mechanical Specialist • Predictive Maintenance	• Mechanical Technician I-IV • Electrical Technician I-IV

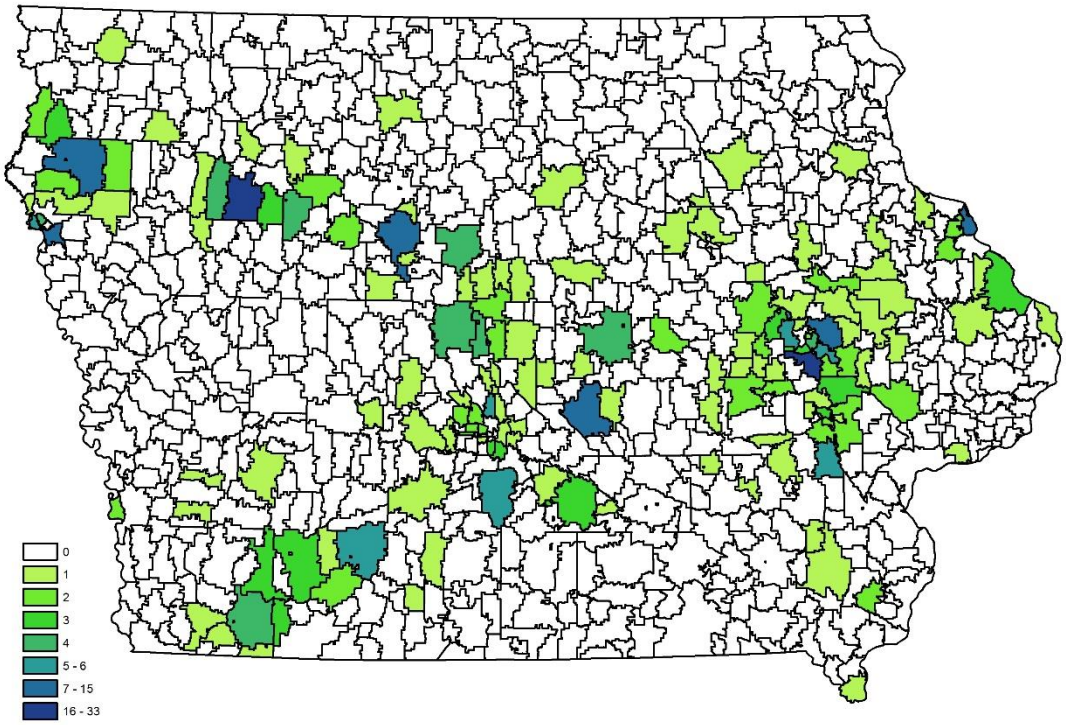

Figure 6. Participants of the Industrial Maintenance Program by Iowa Zip Code.

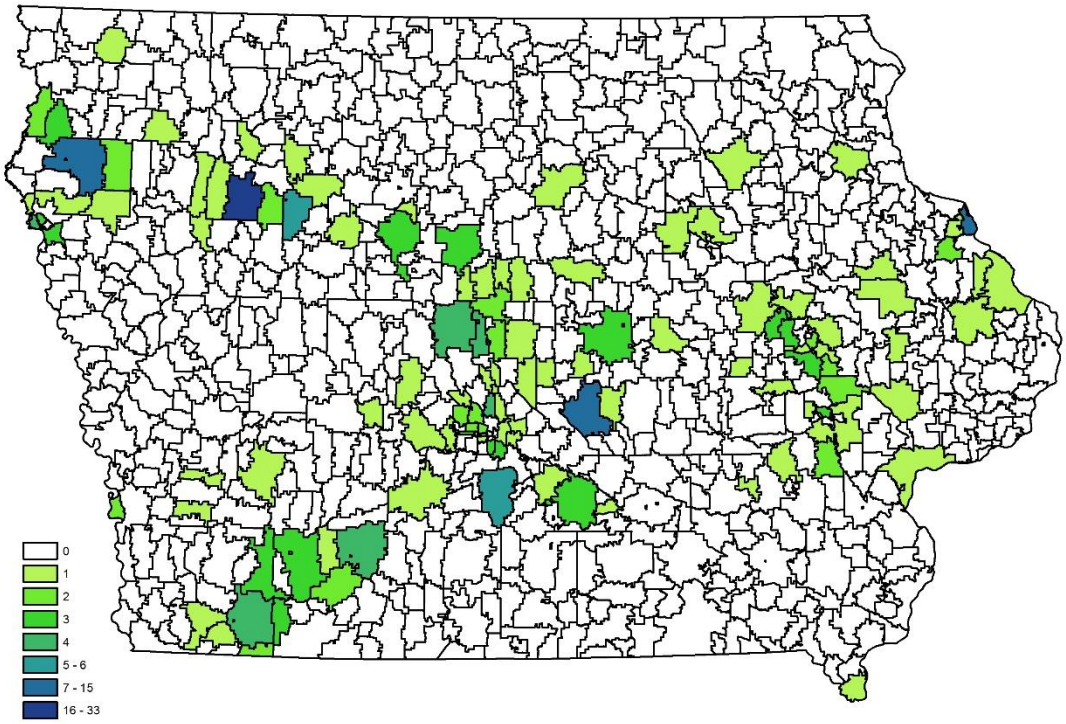

Figure 7. Participants of the Industrial Maintenance Program that Earned at Least One Third Party Certification or College Issued Credential by Iowa Zip Code.

Industrial Automation

The Industrial Automation signature program is offered by Kirkwood Community College (KCC). According to the KCC website, this "program prepares students for a broad range of careers in the industrial automation and process control sector of industry using industry-guided curriculum combined with practical hands-on labs" (Kirkwood Community College, 2016). Students at KCC can complete an Associate's Degree and/or nine non-credit certificates (see Table 5)

By the end of the final year of the grant, 27 unique participants have taken part in an Industrial Automation signature program. Of these participants, all 27 resided in Iowa (see Figure 8) earning a number of third party certifications and college issued credentials (see Figure 9).

Table 5.
Industrial Automation Credential Programs Offered by Kirkwood Community College, Fiscal Year 4.

Credentials Offered*	
Associate's Degree	**Non-Credit Certificates required for graduation:**
• Instrumentation and Automation Technology	• OSHA 10-General Industry • 50+ High Voltage Arc Flash • Residential Voltage Arc Flash • Rigging, Lifting and Cribbing • JSEA – Job Safety and Environmental Analysis • Adult First Aid with CPR • Forklift Class 1, 3, 4, 5, 7 • Snap-On Torque Certification • NCRC

Note: *Diploma and Certificate not offered

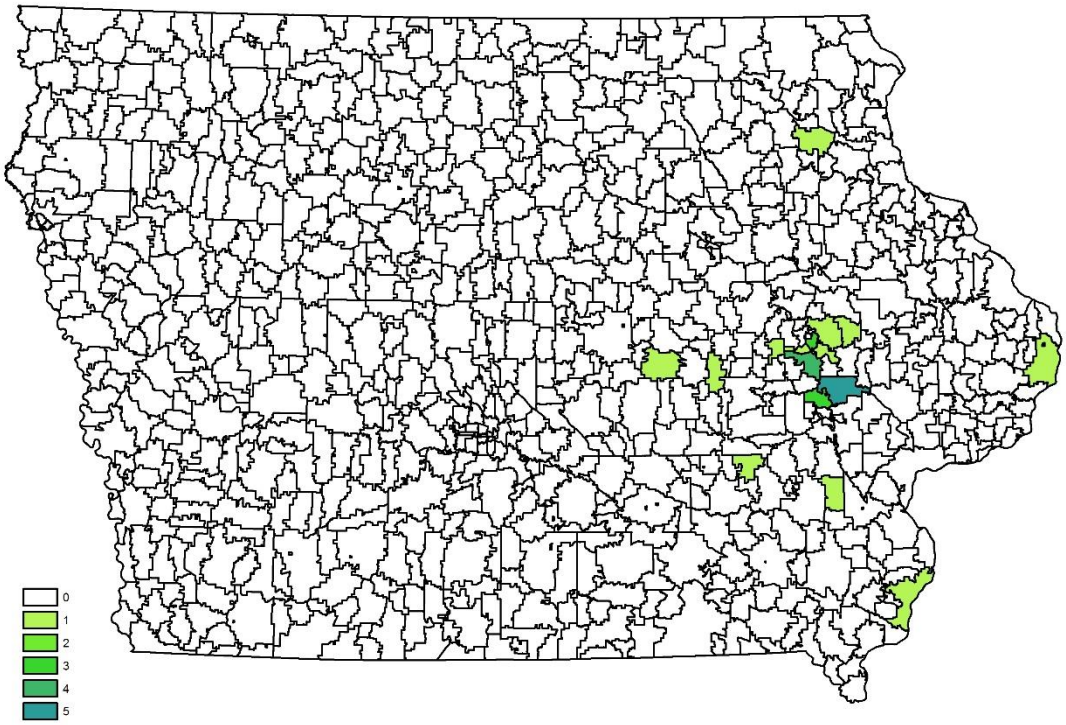

Figure 8. Participants of the Industrial Automation Program by Iowa Zip Code.

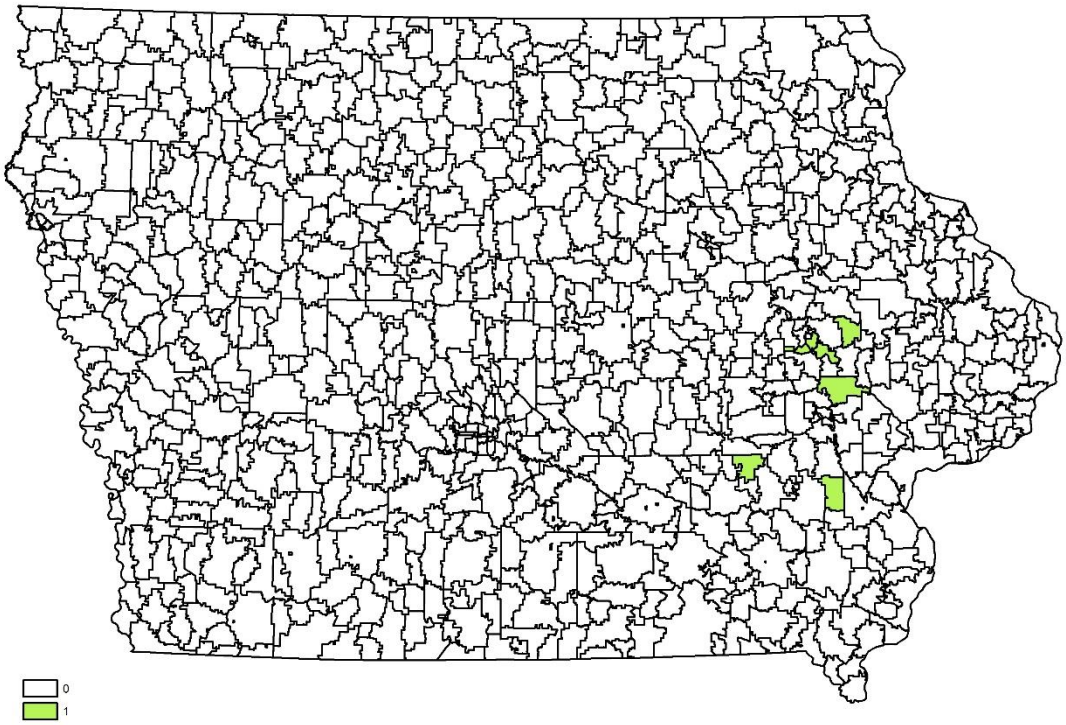

Figure 9. Participants of the Welding Technology/Technology Program that Earned at Least One Third Party Certification or College Issued Credential by Iowa Zip Code.

Manufacturing Technician/Technology

The Manufacturing Technician/Technology signature program is offered by Southeastern Community College (SCC). The program offered by SCC prepares technicians to operate, repair and troubleshoot industrial machinery. Southeastern Community College offers eight non-credit certificates in areas of safety, quality, manufacturing processes and maintenance awareness (see Table 6).

By the end of the final year of the grant, 208 unique participants have taken part in a Manufacturing Technician/Technology signature program. Of these participants, 201 resided in Iowa (see Figure 10) earning a number of third party certifications and college issued credentials (see Figure 11).

Table 6.
Manufacturing Technician/Technology Credential Programs Offered by Southeast Community College, Fiscal Year 4.

Non-Credit Certificates
• Certified Production Technician • CPT Safety • CPT Quality & Measurement • CPT Manufacturing Processes • CPT Maintenance Awareness • Certificate in Lean Operations • Certificate in Lean Applications • Certificate in Professional Lean Leadership

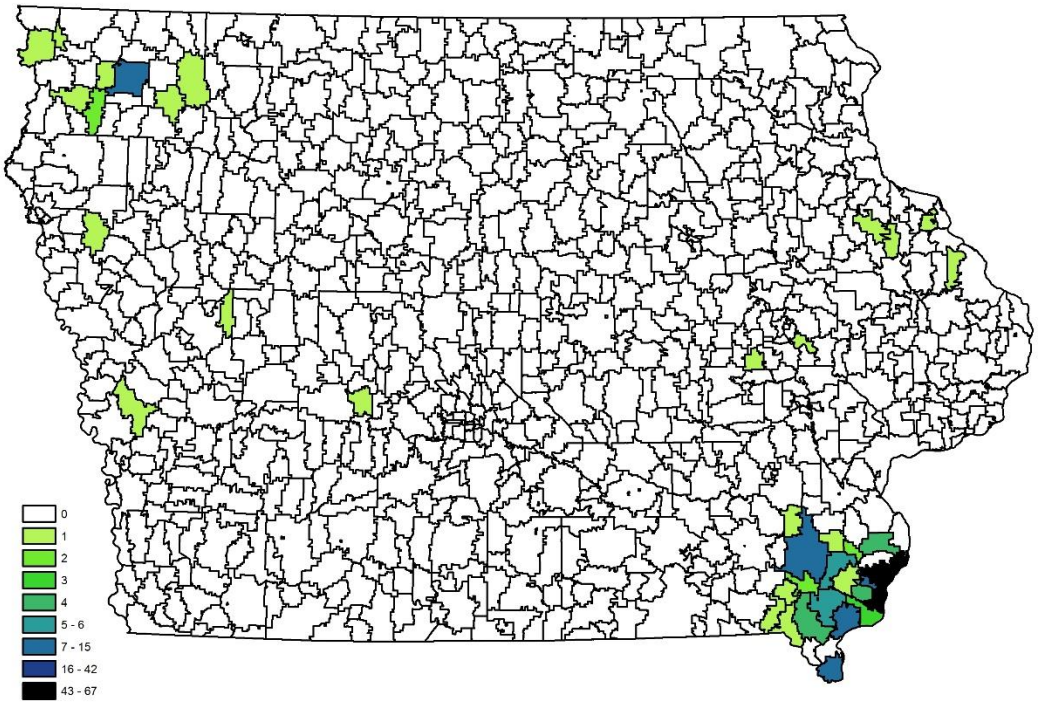

Figure 10. Participants of the Manufacturing Technician/Technology Program by Iowa Zip Code.

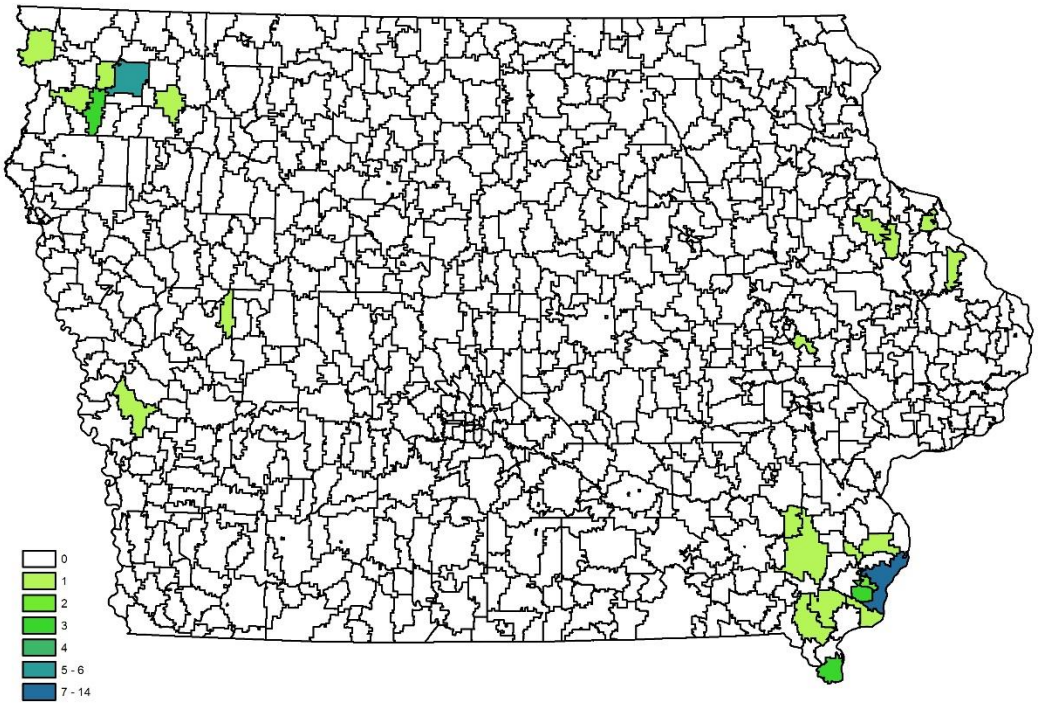

Figure 11. Participants of the Manufacturing Technician/Technology Program that Earned at Least One Third Party Certification or College Issued Credential by Iowa Zip Code.

Robotics/Automated Systems Technology

The Robotics/Automated Systems Technology signature program is offered at Iowa Western Community College. Students that complete the Robotics/Automated Systems Technology program will be "qualified to assemble, install, program, troubleshoot, and maintain robotics and automated systems equipment as technicians in many industries including manufacturing, biomedical, government, and food processing" (Iowa Western Community College, 2016).

A partnership developed with Ellison Technologies Automation (Council Bluffs, Iowa) provides students with the opportunity to spend half of their time in the classroom learning about robotics and while the other half is spent at Ellison Technologies Automation working in the laboratory and gaining hands-on experiences (Iowa Western Community College, 2016).

IWCC offers an Associate's Degree in Robotics/Automated Systems Technology.

By the end of the final year of the grant, 24 unique participants have taken part in a Robotics/Automated Systems Technology signature program. Of these participants, 13 resided in Iowa (see Figure 12) earning a number of third party certifications and college issued credentials (see Figure 13).

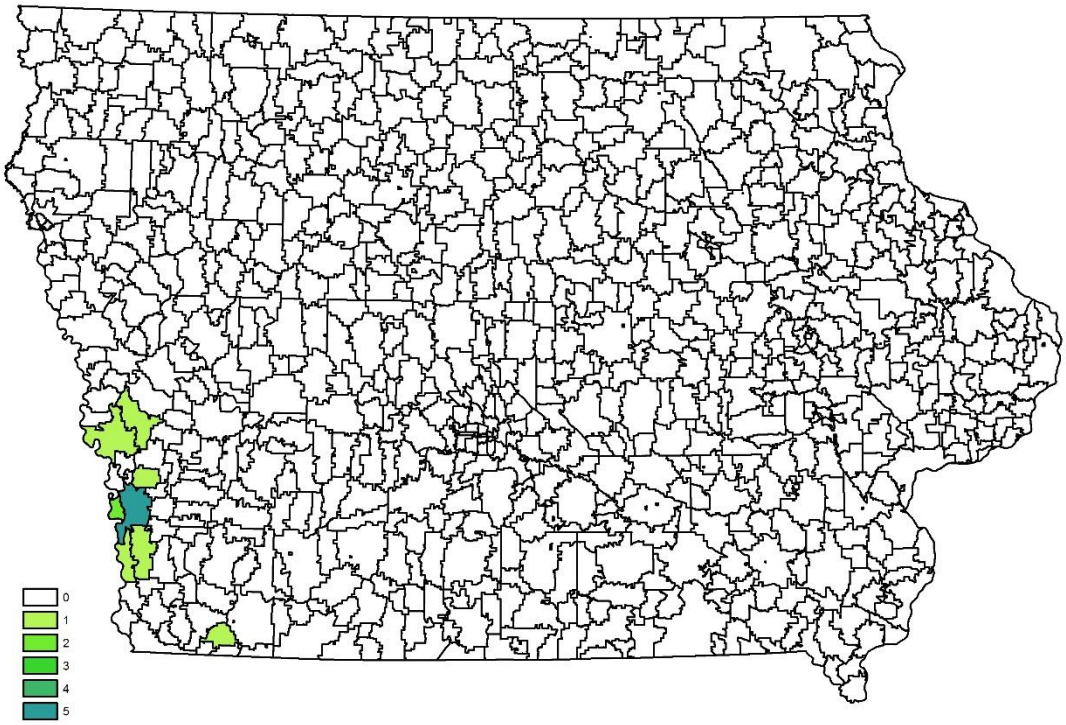

Figure 12. Participants of the Robotics/Automated Systems Technology Program by Iowa Zip Code.

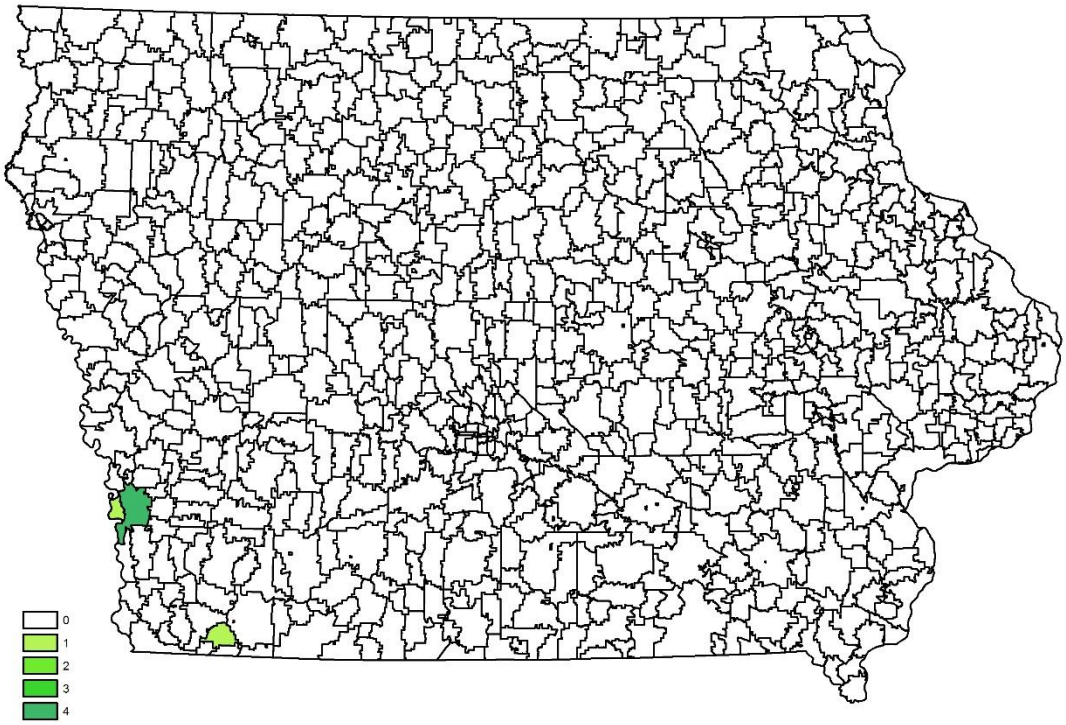

Figure 13. Participants of the Robotics/Automated Systems Technology Program that Earned at Least One Third Party Certification or College Issued Credential by Iowa Zip Code.

Transportation and Logistics

The Transportation and Logistics signature program was initially offered by two Iowa community colleges, Southeastern Community College (SCC) and Kirkwood Community College (KCC), however, at by the end of final year, only Southeastern Community College had students that enrolled in the program. The SCC program focuses on production and inventory management and prepares students to understand and evaluate production and inventory activities related to demand management, procurement, planning scheduling, and quality control.

During the grant period, KCC had no students enroll in their Transportation and Logistics program. KCC marketed the program and opened enrollment for the program multiple times, but there was never any interest in the program.

Transportation and Logistics Credentials offered: One non-credit certificate is offered by Kirkwood Community College and one non-credit certificate is offered by Southeastern Community College (see Table 7).

By the end of the final year of the grant, 32 unique participants have taken part in a Transportation and Logistics signature program. Of these participants, 23 resided in Iowa (see Figure 14) earning a number of third party certifications and college issued credentials (see Figure 15).

Table 7.
Transportation and Logistics Non-Credit Certificates Offered by Iowa Community Colleges, Fiscal Year 4.

Community College	Non –Credits Certificates Offered
KCC	• PACE Transportation
SCC	• Production and Inventory Management

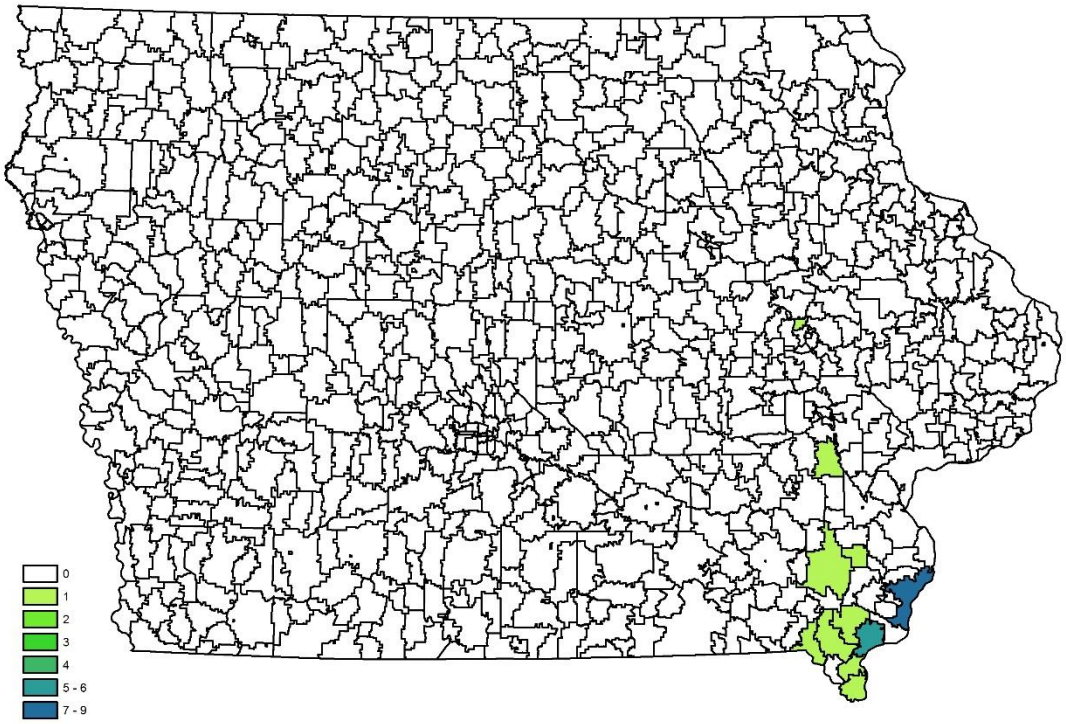

Figure 14. Participants of the Transportation and Logistics Program by Iowa Zip Code.

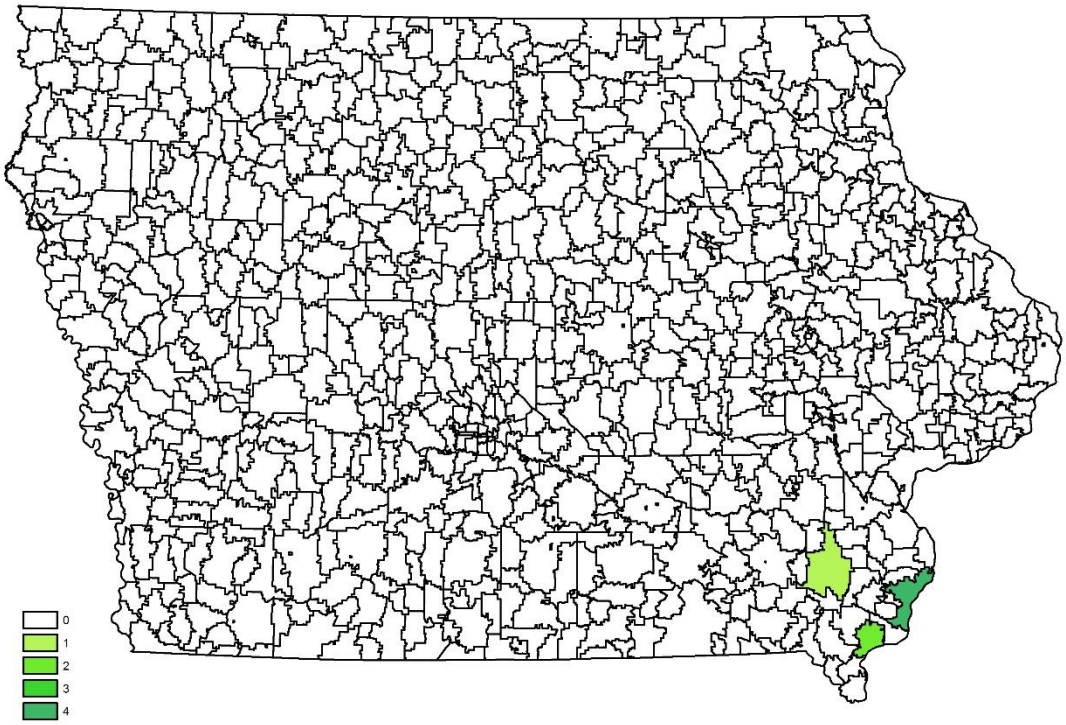

Figure 15. Participants of the Transportation and Logistics Program that Earned at Least One Third Party Certification or College Issued Credential by Iowa Zip Code.

Third Party Evaluator

A comprehensive evaluation of the I-AM Project required by the U.S. Department of Labor (DOL), consisting of an implementation evaluation and an outcomes evaluation, was led by the *Research Institute for Studies in Education (RISE)*. Established in 1974, RISE is the research unit of the School of Education (Iowa State University's College of Human Sciences) and serves the research and evaluation needs in the field of education. RISE evaluates inputs (abilities, actions, and activities designed to achieve the outcomes), intermediate outcomes (processes and immediate or short-term effects) and ultimate outcomes (long-term effects or changes). RISE staff provide expert services and consultation in quantitative and qualitative research design and methodology, survey development, sample selection, data entry, and statistical data analysis, program and project evaluation and publications results. The RISE evaluation team has extensive experience conducting evaluations of cross-sectional and longitudinal projects, data collection, analyzing data using advanced statistical and qualitative analysis, and reporting, as well as experience examining organizational processes, achievement of goals, and stakeholder contributions.

The RISE evaluation team was responsible for conducting both the implementation and the outcomes evaluation of the I-AM Project. The implementation evaluation describes the program environment and its processes, describes and measures various program operations, identifies those factors that may have an impact on the implementation of the program and its outcomes, and offers recommendations that the project team members and leadership can use to strengthen the program. The outcomes evaluation measures change and impact on students as a result of their participation. For example, determining the extent with which program participation predicts employment and change in wage earnings. In addition to conducting the process evaluation, the RISE evaluation team is responsible for the overall management of the evaluation project.

The following describes the evaluation plans/what was completed for the evaluation.

Evaluation Plan—Program Implementation Evaluation

The I-AM Project sought to build training capacity at Iowa's community colleges to meet the needs of the state's advanced manufacturing industry for high skilled workers – both those who are incumbents and those who have suffered job loss related to the Trade Adjustment Act (TAA) or other circumstances. The I-AM Project evaluation studied and reported on how effectively the project met this goal with a focus on the program implementation process.

Evaluation Approach. The a-e-I-o-u Approach to Program Evaluation (Kemis & Walker, 2000) was utilized for the implementation evaluation of the I-AM Project. This evaluation approach provides a framework for organizing key evaluation questions and allows various methods of data collection to be used. This approach examines inputs (actions and activities designed to

achieve specific goals), intermediate outcomes (immediate or short-term effects), and ultimate outcomes (long-term effects or changes). Evaluation questions are organized into five areas:

- (a)ccountability: Did the project team do what they said they would do?
- (e)ffectiveness: How well did they do it?
- (I)mpact: What changed as a result of those actions?
- (o)rganizational or environmental factors: What factors enhanced or limited goal achievement?
- (u)nanticipated outcomes: What happened that was not expected?

These evaluation areas provide the basis for the developed plan and the conducted comprehensive evaluation of the I-AM Project which included pieces on curriculum and delivery methods, student assessment, and participant support and career services. In assessing the operational ***strengths*** and ***challenges*** of the project during and following implementation, not only did we consider overall effectiveness, but we also considered broader impacts, contextual effects related to the organization and project environment, and unexpected results.

Overall Evaluation Activities

Evaluation methods for program implementation are both qualitative and quantitative in nature and address the following four DOL TAACCCT required questions:

- How was the particular curriculum selected, used, or created?
- How were programs and program design improved or expanded using grant funds?
- Did the grantees conduct and in-depth assessment of participants' abilities, skills, and interests to select participants into the grant program?
- What contributions did each of the partners (sector board, employers, workforce system, other training providers and educators, philanthropic organizations, etc.) make towards program design, curriculum development, recruitment, training, placement, program management, leveraging resources, commitment to program sustainability?

Table 8 provides detailed information about the methodology and data sources used to answer these questions. Table 9 contains the timeline of implementation evaluation activities for years 2-4.

Table 8.
Evaluation Questions and Key Areas of Interest Guiding Implementation Analysis

Evaluation Questions and Key Areas of Interest	Methodology	Data Sources
1. How was the particular curriculum selected, used, or created?	• Document analysis • Surveys	• Project records • Project Team • Faculty
2. How were programs and program design improved or expanded using grant funds? • Delivery Methods • Program administrative structure • Support services and other services	• Document analysis • Surveys	• Project records • Project Team • Faculty • Advising staff • Student participants
3. Did the grantees conduct and in-depth assessment of participants' abilities, skills, and interests to select participants into the grant program? • Assessment tools and processes • Persons conducting assessment • Use of assessment results • Usefulness of assessment results for determining program and course sequence for participants • Career guidance	• Document analysis • Comparative statistical analysis of assessment data relative to program outcomes • Surveys	• Project records • Participants' assessment scores • Project Team • Faculty • Advising staff • Student participants
4. What contributions did each of the partners (sector board, employers, workforce system, other training providers and educators, philanthropic organizations, etc.) make towards program design, curriculum development, recruitment, training, placement, program management, leveraging resources, commitment to program sustainability? • Factors contributing to involvement or lack thereof in program • Partner contributions deemed most critical to program success • Partner contributions deemed important, but less impactful	• Surveys	• Project Team • Partners

Table 9.

I-AM Program Implementation Evaluation Timeline

EVALUATION QUESTIONS	Year 2 10/1/2013-9/30/2014		Year 3 10/1/2014 – 09/30/2015				Year 4 10/1/2015 – 09/30/2016			
	Apr-June Q3	**July-Sept Q4**	**Oct-Dec Q1**	**Jan-Mar Q2**	**Apr-June Q3**	**July-Sept Q4**	**Oct-Dec Q1**	**Jan-Mar Q2**	**Apr-June Q3**	**July-Sept Q4**
1. **How was the particular curriculum selected, used, or created?**		WF(S) IL(S) R(DA)		F(S) R(DA)		WF(S) IL(S) R(DA)		F(S) R(DA)	WF(S) IL(S) R(DA)	
2. **How were programs/program designs improved or expanded using grant funds?**	Q(DA)	Q(DA)	Q(DA)	Q(DA)	Q(DA)	Q(DA)	Q(DA)	Q(DA)	Q(DA)	
• Delivery methods		WF(S) C(S)		F(S)		WF(S) C(S)		F(S)	WF(S) C(S)	
• Program administrative structure		WF(S) IL(S)		F(S)		WF(S) IL(S)		F(S)	WF(S) IL(S)	
• Support services and other services		C(S) IL(S)				C(S) IL(S)			C(S) IL(S)	
• Marketing/recruitment		M(S) C(S) R(DA)				M(S) C(S) R(DA)			M(S) C(S) R(DA)	
• Students	S(S) SE(S)	S(S) SE(S)	S(S) SE(S)	S(S) SE(S)	S(S) SE(S)	S(S) SE(S)	S(S) SE(S)	S(S) SE(S)	S(S) SE(S)	
• Sustainability		WF(S) IL(S)		F(S)		WF(S) IL(S) L(S)		F(S)	WF(S) IL(S) L(S)	

*Note: *Data Sources*: S=Students, SE=Student Exit, F=Faculty, IL=I-AM Leads, L=College leadership, M=Marketing, C=Committees, WF=Welding Faculty, P=Employer Partners, R=Project Records (e.g., websites), Q=Quarterly Reports

Method: (I)=Interview, (S)=Survey, (DA)=Data Analysis

Quarters: Q1 (October-December), Q2 (January-March) Q3 (April – June), Q4 (July – September)

Table 9.
I-AM Program Implementation Evaluation Timeline (continued)

EVALUATION QUESTIONS	**Year 2 10/1/2013-9/30/2014**		**Year 3 10/1/2014 – 09/30/2015**				**Year 4 10/1/2015 – 09/30/2016**			
	Apr-June Q3	**July-Sept Q4**	**Oct-Dec Q1**	**Jan-Mar Q2**	**Apr-June Q3**	**July-Sept Q4**	**Oct-Dec Q1**	**Jan-Mar Q2**	**Apr-June Q3**	**July-Sept Q4**
3. **Did the grantees conduct an in-depth assessment of participants' abilities, skills, and interests to select participants into the grant program?**										
• Assessment tools and processes		C(S) R(DA)				C(S) R(DA)			C(S) R(DA)	
• Use of assessment results		WF(S)		C(S) F(S)		WF(S)		C(S) F(S)	WF(S)	
• Usefulness of assessment results for determining program/course sequence of participants.		C(S)		IL(S)		C(S)		IL(S)	C(S)	
• Career guidance				C(S)				C(S)		
4. **What contributions did each of the partners make towards program design, curriculum development, recruitment, training, placement, program management, leveraging resources, commitment to program sustainability?**										
• Contributions by partners		P(S)		P(S) IL(S)		P(S)		P(S) IL(S)		
• Level of partner involvement		P(S)		P(S) IL(S)		P(S)		P(S) IL(S)	L(S)	

*Note: *Data Sources*: S=Students, SE=Student Exit, F=Faculty, IL=I-AM Leads, L=College leadership, M=Marketing, C=Committees, WF=Welding Faculty, P=Employer Partners, R=Project Records (e.g., websites), Q=Quarterly Reports
Method: (I)=Interview, (S)=Survey, (DA)=Data Analysis
Quarters: Q1 (October-December), Q2 (January-March) Q3 (April – June), Q4 (July – September)

IMPLEMENTATION/PROCESS EVALUATION METHODOLOGY

The following section describes methodology used to examine and evaluate implementation activities, key stakeholders' (e.g., students, faculty, project leads, employer partners) perceptions of the I-AM program, and tracking of milestone completion.

Tracking Milestone Completion

The Iowa Advanced Manufacturing (I-AM) Consortium Grant identifies specific priorities, strategies, and milestones each participating community college is required to complete within a specified time frame. To evaluate whether participating community colleges successfully met these milestones, RISE staff regularly reviewed each quarterly report submitted by each community college as well as all of the consortium reports submitted to U.S. Department of Labor (DOL) by the DMACC I-AM project lead team.

Procedures. An initial review of quarterly reports (starting with Fiscal Year 1, Quarter 1) by the RISE evaluation team conducted in Fiscal Year 2 revealed that community colleges reported a general overview of activities taking place at their community colleges rather than addressing their progress in completing the specific milestones required. This trend was partly the result of the quarterly reporting format community colleges were asked to use when submitting their reports. Based on these findings and discussion with the DMACC I-AM project lead team, significant changes were made to the report format providing community colleges with the ability to report on specific milestones in greater detail. However, the new reporting format led to some discrepancies between what community colleges initially reported and what community colleges reported in the quarterly report following the changes. In order to address these discrepancies, RISE staff conducted interviews with or sent emails to Project Leads and other staff members as needed at each community college. Review and monitoring of quarterly reports continued through Fiscal Year 4, Quarter 2.

Milestone Tables. To track progress made by each community college in completing each milestone specified in the grant, RISE staff created a milestone table for each of the three priorities listed in the grant (i.e., Appendix A, Table 1 lists milestones for Priority 1, Table 2 lists milestones for Priority 2, and Table 3 lists milestones for Priority 3). Progress made in completing milestones was updated on a quarterly basis and data were compiled and reported annually and in aggregate using each of the 14 quarterly reporting cycles for the final report. Data utilized for the milestone tables encompasses activities from Fiscal Year 1, Quarter 1 through Fiscal Year 4, Quarter 2.

I-AM Program Evaluation Surveys

A series of surveys[1] was developed to collect information and perceptions from key stakeholders about the overall implementation of the I-AM program, interactions with the DMACC project lead team, communication, services provided, partnerships with employers, and marketing. The focus of these surveys is based on key areas/activities identified in conjunction with the DMACC project lead team. Each survey developed and distributed to key stakeholders is described below.

Student Exit Survey (August 2014 – May 31, 2016)

An exit survey was developed to assess students' experiences while enrolled in I-AM signature programs. Between August 2014 and May 2016, advisors/career navigators (or other designated personnel) from each community college distributed the exit survey to their respective students just before the students completed their signature program. For convenience, the survey was available to students in two formats (i.e., online and paper-based). While not as reliable (e.g. inconsistent responses, out of range values), paper-based versions were available for students that may have had difficulty accessing the surveys online. A total of 439 students responded to the survey.

Students were asked questions about the following experiences in the I-AM program:

- *Enrollment, Educational and Career Goals*. Students were asked several questions about their reasons for enrolling at their community college, their original educational and career goals, how they heard about the program at their community college, and whether they were familiar with Elevate Iowa.
- *Advising, Registration, and Tutoring*: Students were asked about their experiences with success coaches/pathway navigators/career coaches/advisors at their respective college (e.g., whether they met with an advisor, how often they met with an advisor) and about their opinions with regards to resources such as tutoring, advising, workshops, KeyTrain/Career Ready 101, and Credit for Prior Learning.
- *Student Engagement*: Students were asked about their level of engagement/involvement in courses and various activities at their community college, to rate their attendance and

[1] Whenever possible, all surveys were administered using the Qualtrics, a secure online survey software tool (Qualtrics, Provo, UT) and participants were informed that their responses were confidential and would only be reported in aggregate.

to give reasons why they missed class. Students were then asked to indicate what things (e.g., equipment, computer) they needed to learn and to indicate whether they had access to everything they needed. In addition, they were asked whether they participated in events held at their community colleges such as career fairs, tours of local industry, and mock interviews with local employers.

- *Future Career and Educational Plans*. Students were asked about any third party certifications they took while studying and about their plans now that they completed their programs. Students were asked whether they plan to continue their education, what their career plans are, and whether they would recommend their signature program to others.

Student Post-Completion Survey (January 2015 – April 2016)

A post-completion survey was developed to assess students' perceptions about their program of study and their experience while in the I-AM program. Between Spring 2015 and Spring 2016, the survey was distributed at five different time points to students six months following their completion of their I-AM program. A total of 10 students responded to the survey.

Respondents were asked whether they were currently employed in their field of study, and if they were employed they were asked whether they were working on a part time or full time basis. Respondents were asked whether they were satisfied with various aspects of their program of study. For example, they were asked about their satisfaction with their current job situation, the program, the quality of advising, the number of job opportunities available, and with job placement opportunities. They were also asked whether anything was missing in their program and if applicable, to provide descriptions of what they thought was missing.

Project Leads Survey (September 2014, March 2015, January 2016)

A survey was developed to evaluate the overall implementation of the I-AM Program at each community college and as well as the interaction between community college staff and the DMACC project lead team members. The survey was distributed to Projects Leads (or Committee Chairs) in September 2014, March 2015, and January 2016.

In the first two distributions (Sept. 2014 and March 2015) of the survey, I-AM Project Leads/Committee Chairs were asked questions about the following:

- *Communication*. Project Leads were asked about communication between the Project Leads and various other groups including other I-AM faculty, college leadership, advisors, community college project team members, and students.

- *Plans Resulting from Unforeseen Event*. Project Leads were also asked about their respective community college's alternative plans in the event of an unexpected incident

(e.g., faculty are sick, fire, no participants) as well as possible impact on students if these plans were implemented.

- *Strengths, Challenges, and Sustainability of the Program*. Projects Leads were asked questions about the strengths and challenges of the program, whether they experienced any issues with implementing the program (e.g., not enough funds, qualified staff) at their community college and whether they expected their respective signature programs to be sustained when the grant ends.

The final distribution (January 2016) of the survey included additional areas of focus described below:

- *Credit for Prior Learning.* Project Leads were asked about their current Credit for Prior Learning (CPL) policies and practices. In particular, they were asked to indicate whether any Prior Learning Assessments (PLAs) had been implemented since the start of the grant, whether any changes had been made to CPL policies/practices as a result of the I-AM Project, to describe any changes made if they had any and to explain why they had not made changes if they indicated that no changes had been made. Project Leads were asked whether their community college had partnered with any other Iowa community colleges to rework their Credit for Prior Learning options and to describe any resources they used from other Iowa community colleges. Project Leads were also asked whether they thought the updated CPL policies and practices has had a positive impact on their community college.

- *Advising and Student Services.* Project Leads were asked to indicate the extent that they agree to a series of statements about the I-AM Advising Model created by the Advising and Enrollment Committee. For example, they were asked whether they agreed that the model is a useful tool and whether the model has had a positive impact on students. Project Leads were asked to indicate whether various student services (e.g., KeyTrain, NCRC, CPL) were available to the I-AM students at their community college. They were also asked to indicate the extent that they agreed with various statements related to the impact of career navigators/success coaches/advisors.

- *Elevate Iowa Marketing Campaign.* Project Leads were asked to indicate the impact the Elevate Iowa campaign had on recruitment, enrollment, and retention at their community college. Also, Project Leads were asked to indicate their satisfaction with the Elevate Iowa campaign and were asked to provide possible changes to future projects.

- *Community Colleges' Regional I-AM Marketing Campaign.* Project Leads were asked to indicate how active their community college had been in promoting the I-AM Project, the frequency of using various marketing mediums in promoting the I-AM Project, and whether they thought their community college's marketing campaign had an impact on recruitment efforts, enrollment, and retention. Project Leads were asked to provide examples of ways the Advanced Manufacturing marketing has impacted their community

college and to indicate the likeliness that their community college would continue to market the Advanced Manufacturing programs after the grant ends.

- *Employer Partners.* A series of questions were asked about the community college's I-AM Employer Partners. In particular, Project Leads were asked about the level of involvement of their Employer Partners in various I-AM activities at their community college, and whether their Employer Partners provided various opportunities (e.g., internships, resume review, career fairs) to I-AM students. They were asked whether their community college met Employer Partners' expectations with regards to the students' manufacturing skills and whether their relationships with Employer Partners have been developed or enhanced since the start of the I-AM Project.

- *Curriculum.* Project Leads were asked about the impact of various aspects (e.g., the development of the welding curriculum, the certification of instructors, the update of the training facilities) of the I-AM Project on students and their community college. They were asked to indicate their agreement with statements regarding how much they learned about modification/creation of the welding curriculum developed by the I-AM welding subcommittee and its impact on their community college and students. Project Leads were also asked about the faculty's I-AM certifications and supportiveness of the I-AM project.

- *Statewide Management of the I-AM Project.* Project Leads were asked to indicate the effectiveness of the statewide administrative team, the statewide project overall, and communication.

- *Sustainability of the I-AM Project.* Project Leads were asked whether various I-AM signature program components would continue to be offered and whether they thought the program was sustainable after the grant ends. In particular, Project Leads were asked to describe the aspects of I-AM they thought are sustainable and what aspects they thought are not sustainable at their community college.

- *Strengths.* In the last section, Project Leads were asked a series of questions about the overall project and associated strengths. Project Leads were asked to share their thoughts about the opportunities the I-AM grant has afforded their community college in updating/improving their facilities, purchasing or updating their equipment, and hiring qualified/training existing instructors. Project Leads were asked to indicate their agreement with the impact the overall I-AM Project has had on their community college and their students. Finally, Project Leads were asked what the implementation of the I-AM Project has meant to their community college and were asked about thoughts/comments regarding lessons learned.

Marketing Survey (September 2014, October 2015)

A marketing survey, based on feedback from the DMACC Project Lead Team, was developed to assess the impact the regional and statewide marketing campaign had on the implementation of the I-AM Project. The survey was distributed in September 2014 and in October 2015 to individuals with direct knowledge of I-AM marketing at their respective community colleges.

In the first distribution (September 2014), respondents were asked questions in the following areas:

- *Regional Marketing Campaign.* Marketing survey participants were asked about their community college's marketing campaign including how effective their regional marketing campaign has been, which audiences (e.g., underemployed, veterans) are targeted, their thoughts about how their marketing efforts can be improved, how they are spending their allocated Department of Labor (DOL) marketing money, and whether the marketing efforts to various target groups has been effective.

- *Statewide Marketing Campaign.* Marketing respondents were asked about the statewide, Elevate Iowa, marketing campaign. In particular, respondents were asked whether the Elevate Iowa marketing campaign applied to various target groups, its effectiveness in marketing to the targeted groups, effectiveness of the overall statewide marketing efforts, and grant activities related to the Elevate Iowa campaign.

In the second distribution (October 2015), respondents were also asked questions about their regional and statewide marketing campaigns, however the second distribution had questions not included in the first distribution. The second marketing survey is described below.

- *Regional Marketing Campaign.* Respondents were asked to describe their respective community colleges' marketing campaigns. In particular, they were asked questions about their community colleges' level of activity/engagement in promoting I-AM programs at their community college, the frequency of use and effectiveness of various marketing mediums (e.g., Elevate Iowa, television, social media), groups targeted (e.g., underemployed, underrepresented populations) by their campaigns, impact of their campaign on targeted groups, recruitment and retention, and sustainability of marketing the I-AM program.

- *Budgeting and Best Events.* Marketing respondents were asked whether their community college had spent all of funds budgeted for marketing through the I-AM grant and whether they met any challenges in spending these funds. Marketing respondents were asked to share examples of their best I-AM marketing events organized by their community colleges over the past two to three years.

- *Statewide Marketing Campaign.* Marketing respondents were asked about the statewide marketing campaign. In particular, whether they thought that the Elevate Iowa campaign had an impact on recruitment/enrollment, retention, and awareness of advanced manufacturing, their overall satisfaction with statewide marketing efforts, whether they

felt enough support was given by the statewide marketing staff regarding requirements, and/or resources available. Respondents were asked to share their thoughts about changes or improvements they would make, lessons learned, and what worked.

- *ABI (Iowa Association of Business and Industry) Marketing Activities*. ABI was tasked with providing assistance to I-AM in marketing outside the I-AM target groups. I-AM collaborated with ABI to create a K-12 pipeline for students. Marketing respondents were also asked to provide feedback about marketing activities conducted by ABI. In particular, marketing respondents were asked how familiar they were with ABI's efforts, their overall performance in the marketing of the I-AM program, and to rate the level of importance of ABI in sustaining the Elevate Iowa campaign.

Employer Partner Survey (November 2014, November 2015)

An Employer Partner survey was developed to assess the interaction between participating I-AM community colleges and its Employer Partners. The survey was distributed by I-AM Project Leads to their respective Employer Partners in November 2014 and again in November 2015. A total of 72 Employer Partners responded to surveys distributed (55 Employer Partners in November 2014 and 17 Employer Partners in November 2015).

Employer Partners were asked whether they had a collaborative partnership with the community colleges prior to the start of the I-AM Project, how long their respective companies had been partnering with the community colleges, the number of hires resulting from the I-AM Project, and whether any of their current employees were participating in the I-AM Project and whether they participated in their local sector board, local advisory board, and/or the Elevate Campaign.

Employer Partners were asked about their respective companies' expectations of the I-AM Project and their views about I-AM students' preparedness to work in the Advanced Manufacturing field. Employer Partners were asked whether they offered internships, externships, tours, resume review, mock interviews, certification fees, membership dues, and tuition to students at their partner community colleges.

Employer Partners were asked to provide information on any changes they would make to the I-AM program, a positive student success story that exemplifies how the project impacted their company, and any lessons learned with regards to upskilling the Iowa workforce in meeting occupational needs.

Welding Faculty/Subcommittee Survey (December 2014)

A significant and unexpected outcome of the welding signature program was the decision made by all of the community colleges to collaborate on creating a statewide curriculum aligned with AWS SENSE Level I. A survey that assessed welding faculty's perceptions about the process involved in the development of a statewide welding curriculum aligned with AWS SENSE Level

I was created specifically for welding faculty. The welding faculty survey consisted of the six sections described below:

- *Faculty Training and Certifications*. Welding faculty were asked to identify any certifications held. They were also asked about the importance of their welding program to students and their community college.

- *Faculty and Program Preparedness*. Welding faculty were asked about the status (e.g., progress) of AWS SENSE alignment at their respective community colleges and whether they attended consortium welding meetings. Welding faculty were also asked about classroom preparedness and their perceived needs for teaching their respective I-AM courses. Faculty were asked whether they needed additional professional development, equipment, or any other additional resources to get their classrooms up and running.

- *Interactions with Students*. Welding faculty members were asked about the students in the programs at their respective community colleges, the number of office hours they hold each week, and whether they knew which students were I-AM participants. They were also asked to rate students' progress through the program and whether they thought the I-AM Project adequately prepared students for jobs in their field.

- *Communication*. Welding faculty members were asked to rate the effectiveness of communication between themselves and various groups.

- *I-AM Program Strengths, Challenge, and Sustainability*. Welding faculty members were asked to share their thoughts about the strengths and challenges with regards to the AWS SENSE Level I curriculum development process. Respondents were also asked if there was any additional knowledge or skill area they would like to see added to their welding program.

Faculty Survey (April 2015)

A survey was developed and distributed to faculty members participating in various I-AM programs to assess their areas of focus and tenure in the program as well as their perceptions about the I-AM program in general in April 2015. The survey consisted of the six sections described below.

- *Faculty Area of Focus, Role in I-AM, and Length of Tenure in I-AM Program*. Faculty were asked to identify their specific area of focus, their role, and their tenure working on the I-AM Project.

- *Faculty Training and Certifications*. Faculty members were asked to identify the type of training they have received to date, any certification they held or still needed, and whether they received the training (e.g., professional development) they needed to get their classrooms up and running.

- *Faculty and Program Preparedness.* Faculty were asked about classroom preparedness and their perceived needs for teaching their respective I-AM courses. Faculty were asked whether they needed additional professional development, equipment, or any other additional resources to get their classrooms up and running.

- *Interactions with Students and Perceptions of Preparedness.* Faculty members were asked about the students in the programs at their respective community colleges, the number of office hours they hold each week, and whether they knew which students were I-AM participants. They were also asked to rate students' progress through the program and whether they thought the I-AM Project adequately prepared students for jobs in their field.

- *Faculty Contribution and Communication.* Faculty members were asked to rate their level of contribution to the curriculum development at their community college and to rate the effectiveness of communication between themselves and various groups.

- *I-AM Program Strengths, Challenge, and Sustainability.* Faculty members were asked to share their thoughts about the strengths, challenges, and sustainability of the program at their community college. Respondents were also asked whether they thought the I-AM program was beneficial to their community college and its students, whether they were supportive of I-AM efforts, and their perceived importance of the grant. Faculty members were also asked whether they agreed with the various strategies identified for the I-AM program at their community college.

Committee Survey (October 2014)

In October 2014, a committee survey was distributed to assess members of the Advising and Enrollment, Credit for Prior Learning (CPL), Curriculum, Digital Literacy, Marketing, and National Career Readiness Certificate (NCRC) committees regarding their committee participation, completion of committee deliverables and communication. Each committee was responsible for completing of the deliverables described below:

- *Advising and Enrollment Committee*. The advising and enrollment committee was responsible for creating an Intrusive Advising Model/Approach that could be used at all the community colleges.

- *Credit for Prior Learning (CPL) Committee*. The CPL committee was responsible for reviewing Credit for Prior Learning policies at each community college, making recommendations, and providing workshops and training with regards to Credit for Prior Learning.

- *Curriculum Committee.* Deliverables included determining certifications instructors needed, reviewing curriculum, and sharing best practices.

- *Digital Literacy Committee*. Members from the committee assisted by providing information regarding digital literacy.
- *Marketing Committee*. Members of the committee assisted with the development and implementation of the regional and statewide marketing campaigns and the creation of the Elevate Iowa website by sharing best practices, review of expenditures, and discussion of Creative Commons requirements.
- *NCRC Committee*. Members of the committee helped set up training for job profilers and piloted KeyTrain and Career Ready 101 at the community colleges.

All committee members were asked to describe committee deliverables, rate their level of contribution towards the deliverables, and completeness of the deliverables. Committee members were asked to rate their level of satisfaction with timeliness of the deliverables, communication with other committee members, and participation in the committee. Committee members were also asked to describe strengths, weaknesses, and to suggest improvements for each committee they served on.

Committee members that indicated they were career navigators/success coaches were asked about responsibilities related to their role and about the number of students they advise. Career navigators/success coaches were asked how often information is provided to students about KeyTrain/Career Ready 101, NCRC, Credit for Prior Learning, Third Party Certifications, and Career Pathways.

Members of the Credit for Prior Learning Committee were asked about the effectiveness of Advisor Training, Portfolio Workshop, Best Practices Workshop, and individual meetings with the Council for Adult and Experiential Learning (CAEL). Whereas Marketing Committee members were asked about their community college's effectiveness in marketing to the underemployed, underrepresented populations (e.g., minorities, women), unemployed, and veterans.

Credit for Prior Learning Committee Survey (October 2015)

The Credit for Prior Learning Committee survey was developed and distributed to members of the Credit for Prior Learning committee in October 2015, following completion of committee deliverables. To assess committee members' level of familiarity with CPL Committee deliverables, members were asked to describe the goals of the CPL Committee as if they were describing it to someone who was not familiar with the goal. Committee members were asked about current Prior Learning Assessment (PLA) practices at their community colleges (e.g., whether various PLA practices were used and how students were made aware of the PLA practices).

A series of questions regarding current CPL policies were developed to determine whether any policies had been changed at their respective community colleges as a result of the I-AM Project.

Respondents that indicated changes had been made were asked to provide description of the changes. In contrast, respondents that indicated no changes had been made were asked to describe why their community college had not made changes. Respondents were asked to describe resources they used and whether they partnered with other community colleges in their examination of CPL policies.

Committee members were asked to rate the usefulness of various workshop/training opportunities provided in developing/updating CPL policies and practices at their respective community colleges. Committee members were asked whether they agreed that updated CPL practices had an impact on their respective community colleges and students, whether they agreed that the updates will be sustained when the project ends in September, 2016 and whether they agreed that their community college would benefit by continuing their collaboration with the Iowa IHUM Project (Round 4 DOL TAACCCT Grant).

Committee members were asked to share any final thoughts regarding lessons learned relative to the strengthening of CPL policies/practices. In particular, they were asked to share what worked and whether they would make any changes.

Advising and Enrollment Committee, Career Navigator Survey (October 2015)

The Advising and Enrollment Committee, Career Navigator survey was developed and distributed to members of the Advising and Enrollment Committee and career navigators/advisors/success coaches at each community college in October 2015 following completion of committee deliverables.

- *Advising and Enrollment Committee Members*. Respondents that indicated they were members of the committee were asked questions about development of the Intrusive Advising Model/Approach and whether or not their respective community colleges were implementing the model. Respondents that indicated that the model was being implemented at their community college were asked to identify which sections of the model were being utilized and to describe the ease and effectiveness of the model to date. If the model was not being implemented, respondents were asked why it was not being utilized. Committee members were asked to identify any changes they would make as a member of the committee and whether they had any final thoughts about lessons learned about advising and enrollment.

- *Career Navigators/Success Coaches*. Respondents that indicated that they were a Career Navigator/Success Coach/Advisor were asked about the responsibilities and duties associated with their role and about the number of students they advise on average each semester. They were asked to indicate the frequency and usefulness of various student services (e.g., KeyTrain/Career Ready 101, NCRC, Credit for Prior Learning, Third Party Certifications, and Career Pathways), the extent to which they thought their position was sustainable, and the frequency of their students requiring assistance (e.g., with registration, counseling services, housing assistance, etc.). Lastly, Career Navigators

were asked about the Intrusive Advising Model/Approach implemented at their community college and to share lessons learned about their role as Career Navigators/Success Coaches.

Curriculum Committee, Faculty Survey (February 2016)

A Curriculum Committee/Faculty survey was developed and distributed in February 2016 (after the curriculum had been submitted and reviewed by the Project Director) to 42 Curriculum Committee and faculty members at participating community colleges in order to assess the Iowa Advanced Manufacturing (I-AM) curriculum and classrooms.

- *Contributions to Curriculum Revisions*. Respondents were asked to indicate their level of contribution/participation in the development or modification of the I-AM curriculum. Respondents that indicated they were given opportunities to participate in the development or modification of the curriculum were asked to describe their contributions. Respondents were also asked to indicate whether the I-AM Project had a positive impact on students and their community college, whether the I-AM Project adequately prepares students for jobs in their field, whether they (the respondents) are supportive of I-AM Project, and if the program is sustainable after the grant ends.
- *Advanced Manufacturing Faculty*. Respondents that indicated they were faculty members were asked about their role, area of focus, and whether they had any third party certifications, and to describe various aspects of their classrooms (e.g., what classes they teach for I-AM Project, professional development they may have received, and the equipment in their classroom). Faculty were also asked if they had been kept informed of the overall implementation of the program, whether their role in the I-AM program was well defined, whether they had been consulted regarding the equipment, and whether their students benefitted from the Career Navigators/Career Coaches/Advisors/Success Coaches. Respondents were also asked about I-AM strategies and to rate the extent to which they agreed with those strategies.
- *Welding Subcommittee*. Welding Faculty members were asked specific questions about the Welding Subcommittee and the curriculum developed by the Welding Subcommittee. In particular, they were asked whether their community college had implemented any of the courses resulting from the curriculum developed by the consortium-wide Welding Subcommittee. They were asked to describe any challenges they may have faced in implementing the courses. The respondents were also asked if they had learned a great deal about AWS SENSE competencies, AWS qualification requirements, AWS certification requirements, the development of an AWS SENSE aligned program, the writing of the course competencies for welding, and the determination of the lecture/lab ratios and credit hours for welding courses. Respondents were also asked to describe the strengths and challenges of the Welding Subcommittee.

- *Curriculum Committee*. Curriculum Committee members were asked to describe the goal of the Curriculum Committee as if they were describing the goal to someone who was not familiar with it. Respondents were asked about the impact of the Curriculum Committee's deliverables on their community college and on their students and whether the deliverables were sustainable after the grant ends. Curriculum Committee members were asked whether their role in and purpose of the Curriculum Committee was clearly defined, whether the collaboration and communication between committee members was productive, and whether the Curriculum Committee was effective in meeting committee goals and deliverables. Respondents were asked to share whether they would make any changes as a member of the Curriculum Committee and were asked to share any thoughts with regards to building stacked and latticed curriculum and career pathways.

College Leadership Survey (February 2016)

A survey was developed and distributed in February 2016 to 39 Iowa community college leaders (i.e., Presidents, Deans, Provosts) that had direct knowledge of the I-AM program at their respective community colleges. The survey consisted of the following five sections:

- *Opportunities Afforded by the I-AM Project.* College Leadership representatives were asked whether the I-AM grant afforded their respective community colleges an opportunity to purchase/update/improve their facilities and/or equipment, hire and/or train instructors, increase recruitment and retention of students, increase marketing of the program, and whether they were able to develop or strengthen partnerships with industry and local businesses.

- *Impact of the I-AM Project*. College Leadership representatives were asked whether the I-AM program affected their ability to attract students in general, and students identified as displaced, Trade Adjustment Assistance (TAA) eligible, and/or unemployment or underemployed. They were also asked whether the I-AM program allowed them to expand their marketing efforts, implement the revised curriculum, and provide enhanced support services to students.

- *Statewide Management of the I-AM Project.* College Leadership representatives were asked to indicate the effectiveness of various statewide administrative team aspects of the grant including the overall management of the grant and communication between their respective community colleges and the statewide administrative team.

- *Sustainability of the I-AM Project.* College Leadership representatives were asked about sustainability of the I-AM Project at their community college, whether any of the signatures program components would continue after September 30, 2016, and plans to ensure that the signature programs remain up-to-date and in compliance with industry standards.

- *Strengths and Challenges.* College leadership representatives were asked about the strengths and challenges related to the implementation of the I-AM grant. Specifically, the College Leadership were asked to describe what the implementation of the project has meant to their community college and to share any thoughts about lessons learned.

Challenges Related to the Surveys

The development of surveys encountered several challenges, including identification of appropriate key stakeholders to survey, getting feedback from appropriate I-AM groups on questions developed, management of multiple surveys developed simultaneously, distribution of surveys, and achieving an adequate response rate.

Identification of Key Stakeholders to Survey. One challenge in developing the surveys is ensuring that the appropriate people are asked the appropriate questions. In working with the DMACC Project Lead team, the RISE evaluation team was able to identify the most knowledgeable people who could provide meaningful responses to questions regarding what was happening at their respective community colleges, as well as share their perceptions about any experiences they may have had interacting with I-AM Project staff. Questions also had to be meaningful in order for the responses to help project staff at DMACC document and understand what was occurring as a result of the program and help them make needed changes so that the program would be most effective.

Obtaining Feedback. In developing the various surveys, much discussion took place about the content of the surveys. RISE sought additional advice and input from multiple groups as the survey instruments were finalized. However, for some of the surveys, it proved difficult to get feedback from the field, likely due to inability to make time for review or disinterest. In those cases, the surveys were distributed without that additional feedback. With the project staff, we continued to review surveys for each survey administration to make sure that the questions gave the information we intended and we sought to receive.

Management/Development of Multiple Surveys Simultaneously. Numerous surveys were developed over multiple three to six month windows. Coordination of initial question development, feedback from the DMACC Project Lead team, timely feedback from others, and survey administration was compressed to accommodate certain timelines for survey development and data collection. A calendar, for RISE team use, was set up to manage the distribution of the implementation surveys. This calendar identified the quarter in which the survey needed to be distributed, what group the survey should be distributed to, and the person/group responsible for survey distribution.

Response Rates. A final major challenge was getting people to respond to the surveys (see Table 10). The highest response rate this past year, when distributed through a panel, was from the Advising and Enrollment Committee/Career Navigator survey with a response rate of 100%. The

lowest response rate during this project, when distributed through a panel, was from the student six months after graduation survey with a response rate of 4.4%. We were unable to determine a response rate for the Student Exit Survey as the link is distributed through the community college site.

The information gathered from the surveys is informative both to the project as a whole, as well as to the individual community colleges. This is a large project that relies on site-based data collection for some of the surveys. We worked closely with the DMACC Project Lead Team to understand the way they collect data on their campuses and how they could help us by encouraging survey participation, particularly for student responses. The issue of survey response rates did not improve throughout the grant even when respondents only had one survey to take versus times where the respondents had multiple surveys to take.

Table 10.
Number of Respondents for I-AM Evaluation Surveys Distributed

Survey	Respondents	n	Data Collection Time Period
Student Exit	Students who finished their program of study	439	08/15/2014-05/31/2016
Student – Six Months Post Graduation	Students six months after completion of the program	10	03/26/2015-03/31/2016
Project Leads	Project Leads Committee Chairs	20	08/28/2014-09/30/2014
Project Leads	Project Leads	18	03/26/2015-05/15/2015
Project Leads	Project Leads	15	01/28/2016-03/31/2016
Marketing	Marketing Directors/Coordinators Marketing Committee	27	09/08/2014-10/08/2014
Marketing	Marketing Directors/Coordinators Marketing Committee	17	10/21/2015-12/15/2015
Employer Partner	Local industry	55	11/10/2014-12/31/2014
Employer Partner	Local industry	17	11/04/2015-12/15/2015
Welding Faculty	Welding faculty	35	12/03/2014-12/31/2014
Faculty	All faculty members	22	04/01/2015-06/01/2015

Table 10.
Number of Respondents for I-AM Evaluation Surveys Distributed

Survey	Respondents	n	Data Collection Time Period
Committee	Committee members	65	10/23/2014-12/31/2014
Credit for Prior Learning Committee	Credit for Prior Learning Committee members	19	11/04/2015-12/15/2015
Advising and Enrollment Committee, Career Navigators	Advising and Enrollment Committee members Career Navigators	16	10/07/2015-10/31/2015
Curriculum Committee, Faculty	Curriculum Committee members All faculty members	25	02/03/2016-03/31/2016
College Leadership	College Deans Vice Presidents Provosts	26	02/17/2016-03/31/2016

IMPLEMENTATION EVALUATION RESULTS

This section presents summary results of the entire grant period selected evaluation activities including reports for milestone completion, student surveys, Project Leads surveys, and Employer Partners. The detailed results are located in Appendices A through U.

Status of Milestone and Deliverable Completions

All participating community colleges completed all milestones, strategies, and priorities by the end of Fiscal Year 4, Quarter 2 (March 31, 2016). For Priority 1: Build stacked and latticed curriculum and career pathways in signature programs, all of the milestones were completed by the end of Fiscal Year 4. All but three of the milestones were completed by the end of Fiscal Year 3. For Priority 2: Build a steady pipeline of skilled workers for Iowa's advanced manufacturing in-demand occupations, all of the milestones were completed by the end of Fiscal Year 4. All but two of the milestones were completed at the end of Fiscal Year 3. For Priority 3: Improve the collaboration and alignment between community college programs, the workforce system, and targeted industry employers to keep and create high quality jobs in Iowa, participating community colleges have been actively engaged in activities specified in priority 3. However, priority 3 milestones were ongoing throughout the entire grant and are not expected to be completed until the grant ends on September 30, 2016.

The detailed report is available in Appendix A.

DOL TAACCCT Required Research Questions

The four DOL TAACCCT required questions for the program implementation evaluation were answered through a variety of means including surveys. The following section is a summary of responses to the four DOL TAACCCT required questions.

How was the particular curriculum selected, used, or created?

Faculty and members of the Welding Subcommittee and Curriculum Committee were instrumental in the development, updating, and alignment of curriculum used in I-AM signature program courses across the community colleges. In particular, faculty helped with the reviewing, development and modification of the curriculum in order to ensure that the curriculum was

current and aligned with industry standards and third party certifications. Members of the Welding Subcommittee, consisting of welding faculty, Project Leads, and other key stakeholders, met regularly to create a statewide welding curriculum aligned to AWS SENSE Level I. Collaboration on the statewide welding curriculum included discussions on which elements would be included in each of the 14 courses, determining the appropriate lecture/lab ratio, and the number of credit hours needed for each course. Curriculum Committee members worked on developing, updating, and/or revising their community college's curriculum as well as updating their facilities and certifying their instructors.

How were programs and program design improved or expanded using grant funds?

Implementation of I-AM signature programs (e.g., welding with AWS SENSE Level I) involved both the development of new programs and expansion of existing programs. Improving upon existing programs involved review, modification, and alignment of curriculum to current industry standards and third party certifications. The development of the statewide welding curriculum aligned to AWS SENSE Level I (an industry standard) is the best example of how funds were used to improve or expand a program. Although it was an optional curriculum, each of the participating community colleges implemented the curriculum either partially or fully.

The I-AM program also provided community colleges with the opportunity to build or expand capacity of their advancing manufacturing programs. Community colleges were able to hire and train faculty, purchase of equipment that meet industry standards, provide enhanced student services (e.g., intrusive advising, NCRC testing, KeyTrain/Career Ready 101) and implement the Intrusive Advising Model/Approach created by the I-AM Advising and Enrollment committee. Navigators/Success Coaches/Advisors were hired with grant funds to help students navigate/progress through their signature programs.

Grant funds were used to market the I-AM programs at a regional as well as statewide level allowing community college to reach potential students that may not be familiar with the I-AM programs. The statewide marketing campaign evolved in the Elevate Iowa marketing campaign that will continue to function once the grant ends on September 30, 2016.

Did the grantees conduct an in-depth assessment of participants' abilities, skills, and interests to select participants into the grant program?

The implementation of the Intrusive Advising Model/Approach, developed by the Advising and Enrollment Committee, provides guidance on what students need to complete in order to commence work in an I-AM program. For example, the model indicates requirements such as taking the Compass test (an admission assessment), the NCRC assessment (some community colleges require the NCRC while others recommend taking it), and determining whether students

should apply for Credit for Prior Learning. Community colleges implemented various Prior Learning Assessment practices for students to use while other community colleges used Career Navigators and Advisors to assess participants' abilities and skills.

What contributions did each of the partners make towards program design, curriculum development, recruitment, training, placement, program management, leveraging resources, commitment to program sustainability?

Employer Partners contributed to the success of the I-AM program in multiple ways. For example, Employer Partners provided students with internships, tours of their facilities, resume review, mock interviews, and participation at career fairs. They participated in regional and local sector and advisory boards where they helped by providing feedback to the community colleges regarding their curriculum. Partners also provided advice as needed when purchasing equipment and they provide feedback about students they hire from the program.

The Employer Partners provide feedback to community colleges about their expectations from students in terms of abilities and in turn, community colleges work with partners to accommodate their needs. Employer Partners contribute by referring their employees or unsuccessful advanced manufacturing job applicants to the I-AM program for training.

Results of I-AM Program Evaluation Surveys

The following section describes a summary of survey results. For complete and detailed results, see Appendices B-U.

Student Exit Survey (distributed August 2014 – May 2016)

Most students reported that they enrolled at their community college because it was close to home, because they could save money, and because their community college has a close relationship with industry. Students heard about their program in a variety of ways, including friends, school counselor or advisor, or family members. Students were also asked whether they had heard about the Elevate Iowa campaign (see Figure 16). When students were asked what their original education goal was when enrolling into the program, students stated that their goal was to either complete a certificate program, complete a diploma, or complete an Associates' degree at their community college (see Figure 17). Students were also asked about their experiences and perceptions about their Success Coach/Pathway Navigator/Career Coach. The majority of the students indicated their Advisor was knowledgeable about program requirements (see Figure 18), transferring to other colleges, helpful, friendly, and available.

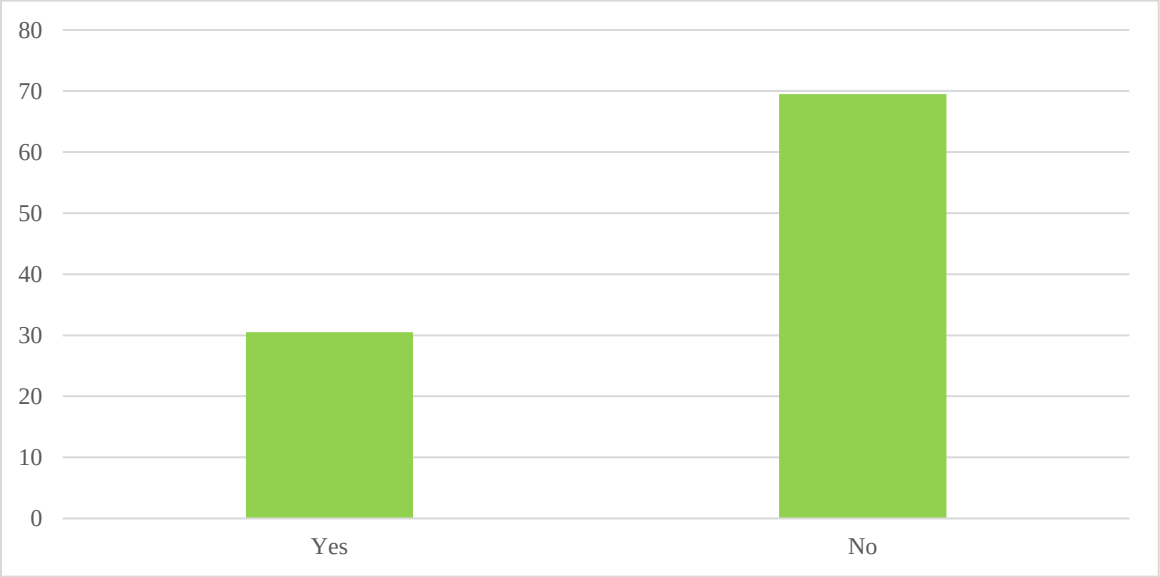

Figure 16. Percentage of Students Who Have Heard About the Elevate Iowa Campaign.

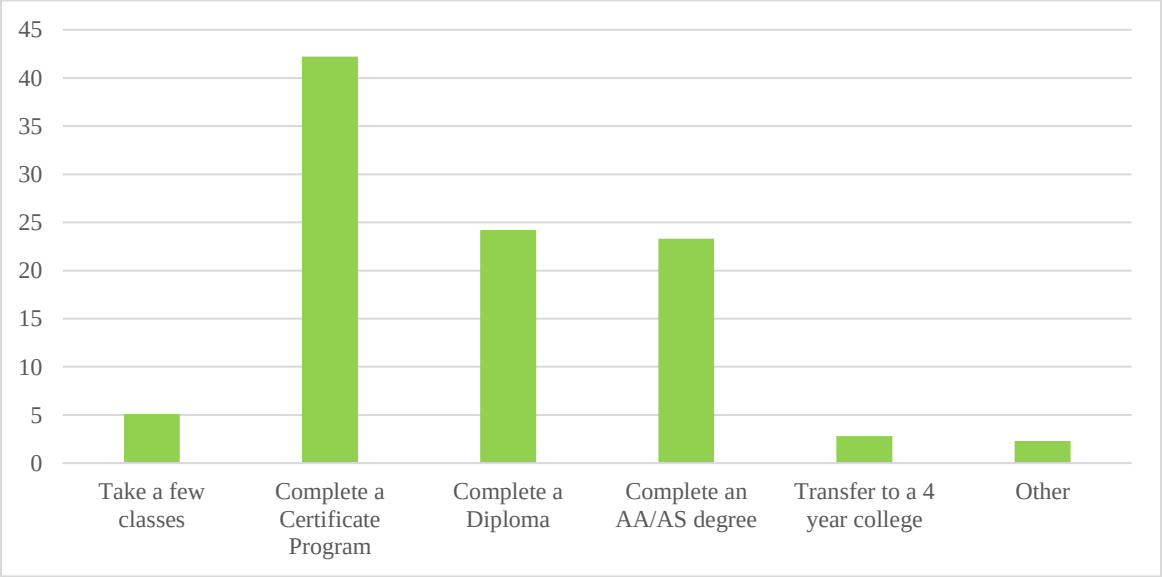

Figure 17. Students' Educational Goal Upon Enrollment in Their Program.

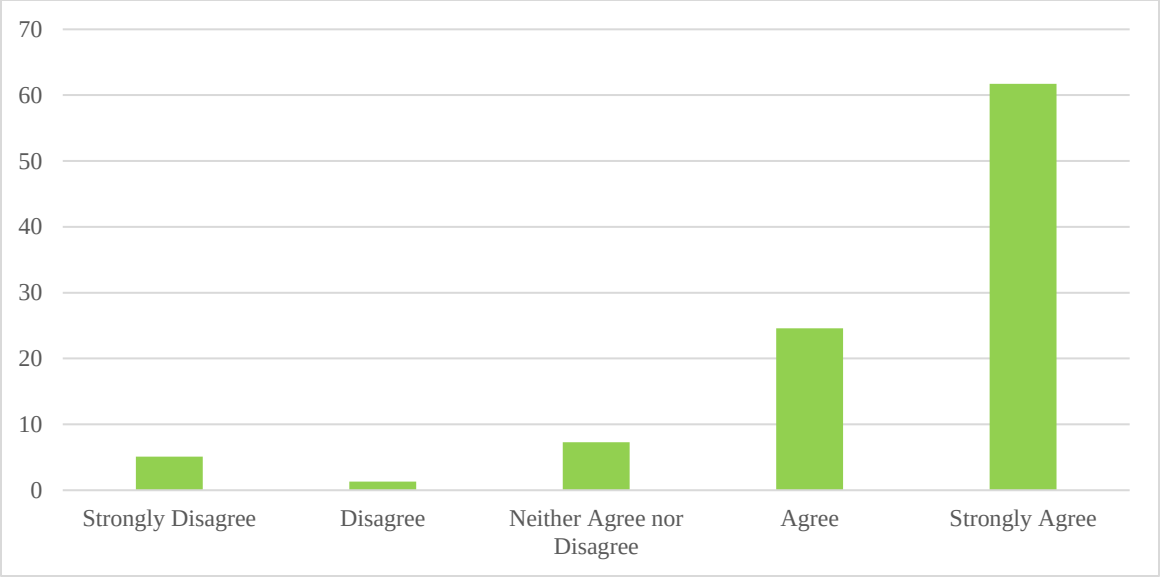

Figure 18. Students' Agreement with the Statement: "My Success Coach/Pathway Navigator/Career Counselor is knowledgeable about program requirements."

Students were asked about their use of KeyTrain/Career Ready 101 (i.e., online preparation resources). Only one-third of the students reported that they used KeyTrain/Career Ready 101 at their community college (see Figure 19). Students were also asked about Credit for Prior Learning. Less than one-third of the students reported that someone (e.g., advisor, career navigator, success coach) discussed Credit for Prior Learning with them (see Figure 20). Students felt that they did have access to everything they needed in order to learn. Students were also asked whether they participated in certain events organized by their community college. Students participated in career fairs, tours of industry, mock interviews, and having employers look over their resumes (see Figure 21). Students also identify the third party certifications they had received. Students had received the NCRC, American Welding Society (AWS) certification, and Manufacturing Skills Standards Council Certified Production Technician (MSSC CPT), among others (see Figure 22). In the end, the majority of the students would recommend their program to others (see Figure 23).

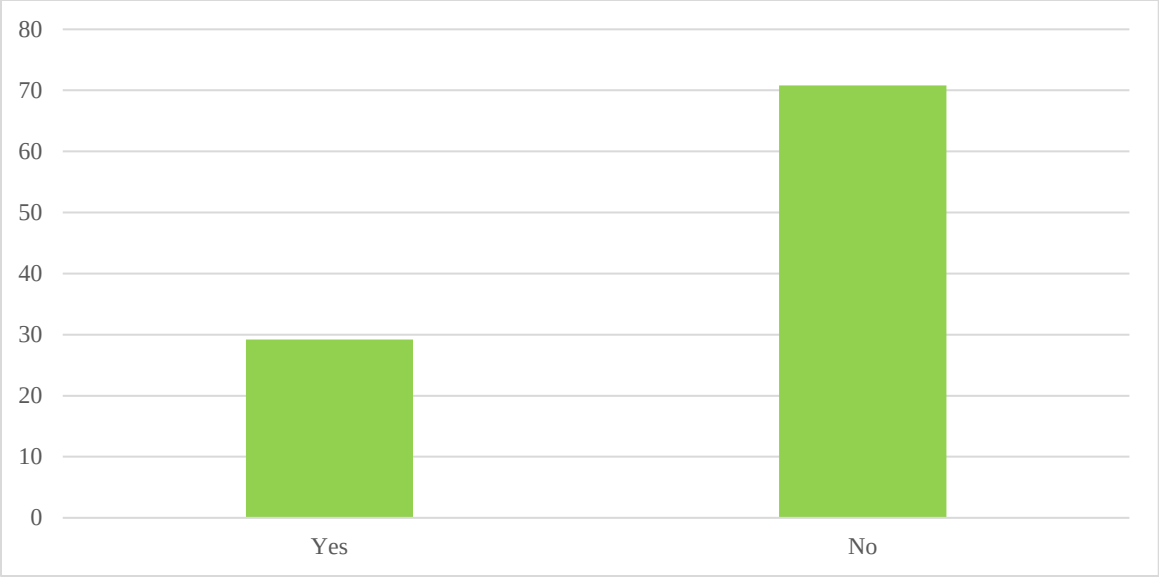

Figure 19. Students' Use of KeyTrain/Career Ready 101 at Their Community College.

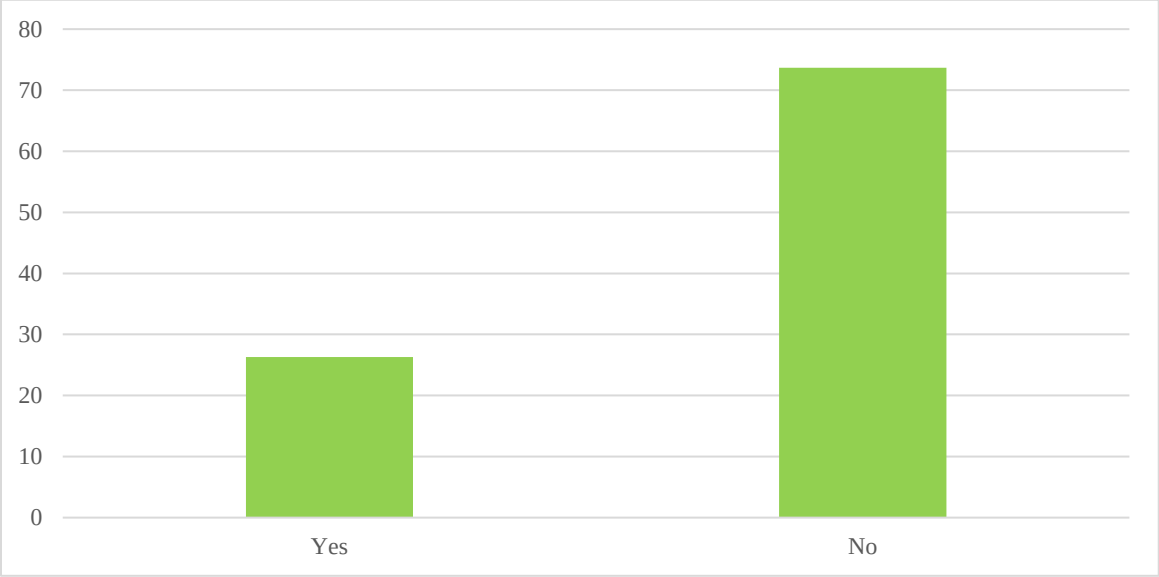

Figure 20. Percentage of Students Who Were Informed of Credit for Prior Learning.

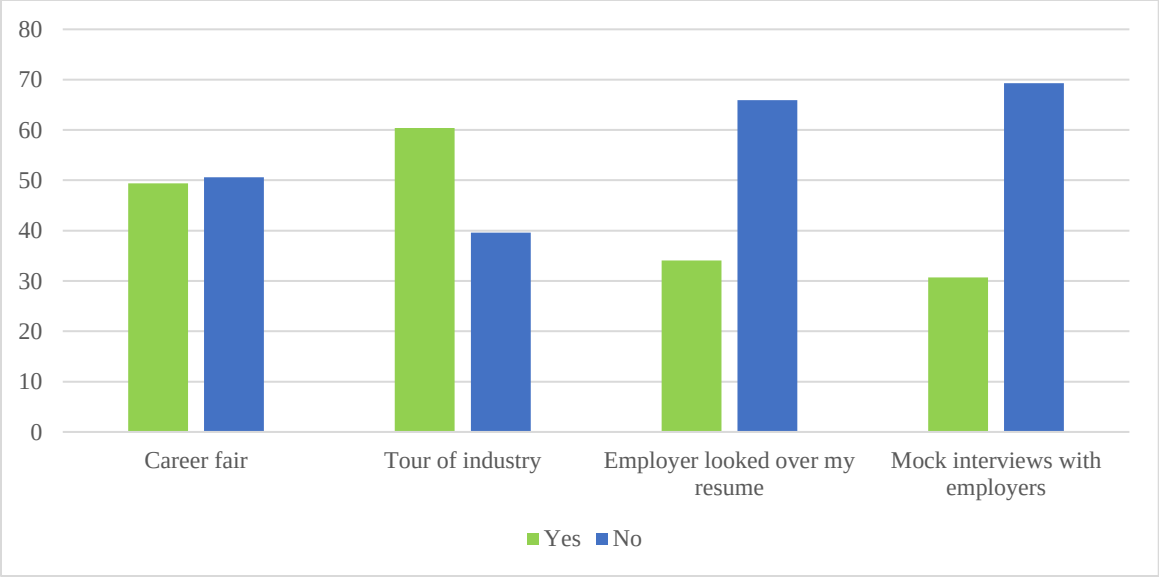

Figure 21. Student Participation in Community College Events.

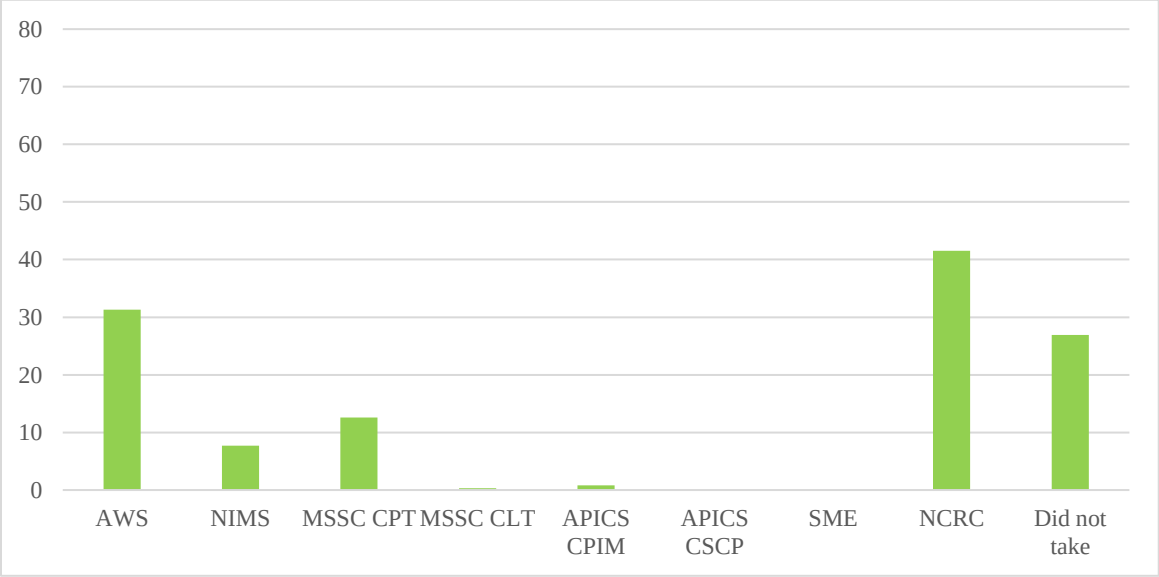

Figure 22. Third Party Certifications Earned by Students.

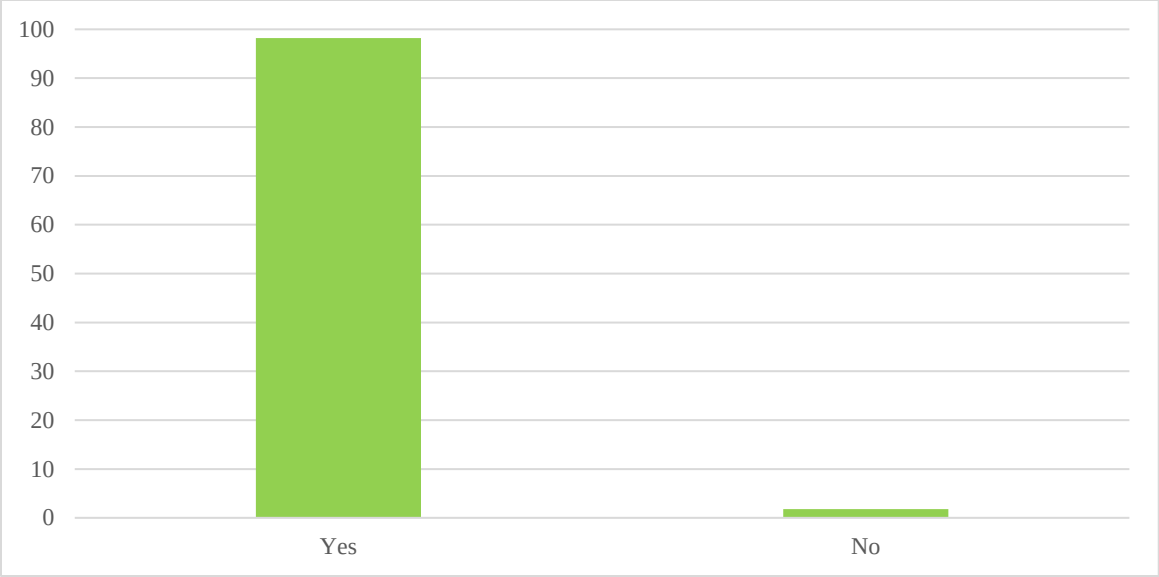

Figure 23. Percentage of Students Who Would Recommend Their Program to Others.

The detailed Student Exit Survey reports are available in Appendices B through E. Welding student responses regarding their overall perceptions of the welding program were examined independently. The detailed report for the welding students is available in Appendix F.

Student – Six Months Post Graduation Survey (distributed January 2015 – April 2016)

Of the 227 participants invited to participate in this survey, only 10 students responded. At six months post-graduation, the majority of students indicated they were employed. The majority indicated they were satisfied with their current job situation, their program prepared them for their career, they would recommend their program to others, satisfied with the quality of their education, satisfied with the number of available job opportunities, and are satisfied with the job placement opportunities.

The detailed report is available in Appendix G.

Project Leads Survey (distributed September 2014, March 2015, January 2016)

September 2014 Distribution. To evaluate communication about the I-AM Project, Project Leads were asked to rate the effectiveness of communication between themselves and other I-AM members, advisors, and support staff. The majority of Project Leads found communication to be either effective or very effective across all groups. The majority of Project Leads agreed that communication was shared in a timely manner, that they had the information needed to do an effective job, and that faculty, college leadership, support staff and advisors were on board with

the grant. Project Leads were asked to identify the top three strengths and weaknesses of their signature programs at their respective community colleges. Strengths of the signature programs included curriculum, expanded/new programs, partnerships with employers and Iowa Workforce Development, ATF/AWS accreditation, equipment/renovation, and increased enrollment. Weaknesses/challenges of the signature programs included problems with communication, completing curriculum alignment, lack of buy in, and issues with embedding certifications/instructor resistance. All of the Project Leads indicated that they thought the program was sustainable.

March 2015 Distribution. To evaluate communication, Project Leads were asked to rate the effectiveness of communication between themselves and other I-AM members, advisors, and support staff. The majority of Project Leads found communication to be either effective or very effective across all groups. In general, Project Leads perceived that faculty, college leadership, other team members, advisors, support staff and student services were accessible either most of or all of the time. Project Leads were asked whether their community college had alternative plans in the event of something unexpected that may interfere with the implementation of the project. The majority of Project Leads reported that they have not had to implement an alternative activity. The majority of Project Leads indicated that they did not experience any issues implementing the I-AM program at their respective community colleges.

Project Leads were asked to identify the top three strengths and weaknesses of their signature programs at their respective community colleges. Strengths of the signature programs included updating of existing programs, ATF/AWS accreditation, creation of new programs, employer partnerships, and increased enrollment. Weaknesses/challenges of the signature programs included lack of enrollment in the various programs, developing/implementing Credit for Prior Learning policies, availability of qualified personnel, communication, and the need for more equipment.

January 2016 Distribution. In this final distribution, the Project Leads were asked about all aspects of the I-AM Project. Project Leads indicated that Credit for Prior Learning policies changed as a result of the I-AM project with one-fifth indicating that extensive changes had been made, two-fifths indicated that moderate changes had been made, and two-fifths indicated that minor changes had been made (see Figure 24). The majority indicated the updated Credit for Prior Learning practices have had a positive impact on their community college and on students and indicated the updated Credit for Prior Learning practices are sustainable after the grant ends.

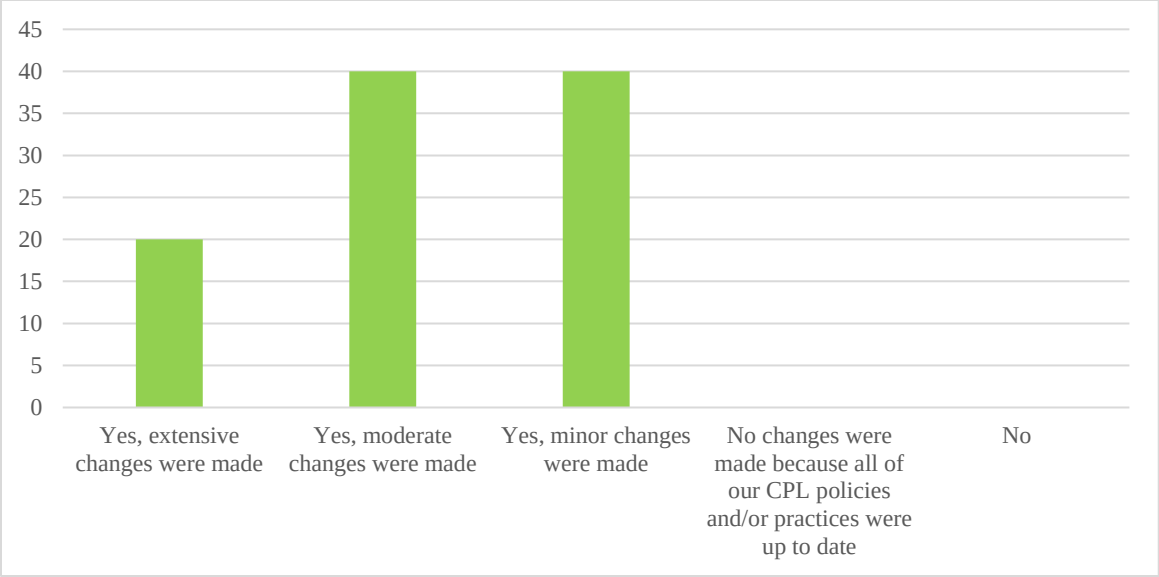

Figure 24. Changes Made to the Community Colleges' Credit for Prior Learning Policies.

Project Leads were asked to indicate the extent with which they agreed with various statements concerning the I-AM Advising Model/Approach developed and proposed by the Advising and Enrollment Committee. The majority of the Project Leads agreed that the Intrusive Advising Model/Approach is a useful tool, that it has had a positive impact on students, that it is sustainable, and that it is looked upon favorably at their community college. Project Leads were asked to indicate whether their community college offered various student services and to rate their perceived level of usefulness for students. All Project Leads indicated that the NCRC, Credit for Prior Learning, and third party certifications are provided to students at their community college (see Figure 25 for the usefulness of the NCRC). Almost all indicated that Career pathways and KeyTrain/Career Ready 101 are provided to students by their community college (see Figure 26 for the usefulness of KeyTrain/Career Ready 101). Almost all of the Project Leads indicated that students benefitted from their interactions with the Career Navigators/Career Coaches/Advisors/Success Coaches.

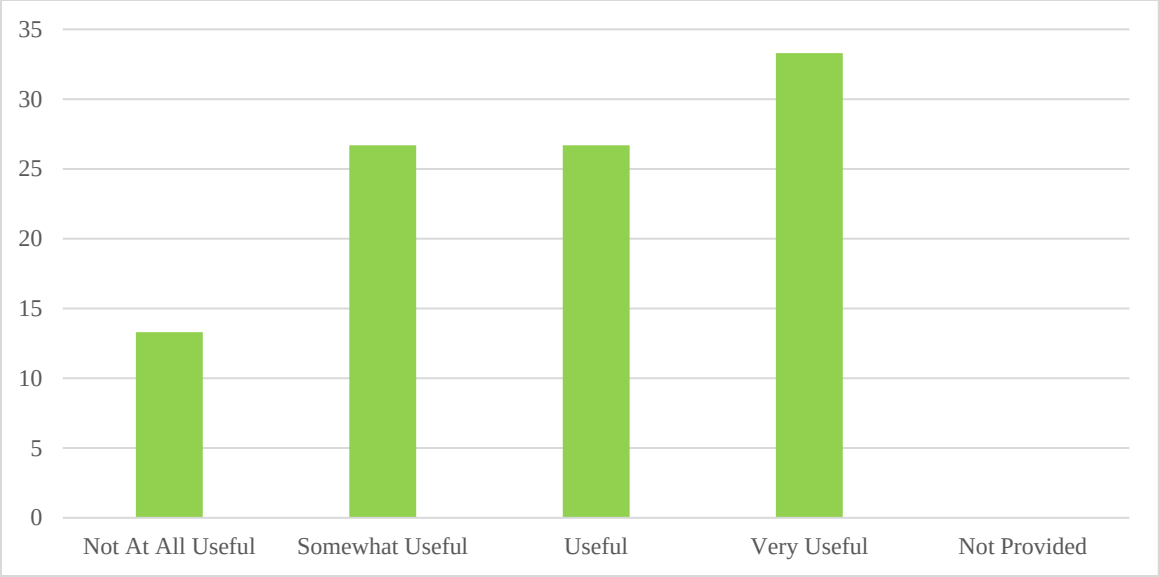

Figure 25. Perceived Usefulness of the NCRC by Project Leads.

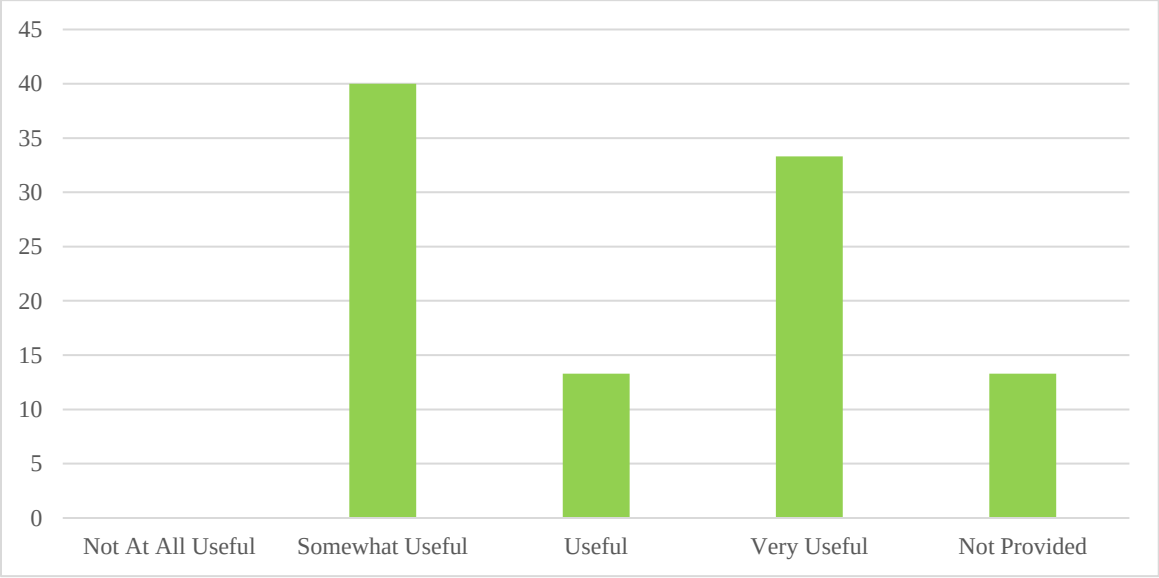

Figure 26. Perceived Usefulness of KeyTrain/Career Ready 101 by Project Leads.

All Project Leads indicated that the Elevate Iowa marketing campaign has had a positive impact on increasing awareness of Advanced Manufacturing. Two-thirds of the Project Leads reported that they are satisfied or very satisfied with Elevate Iowa marketing efforts. Almost all Project Leads indicated that their community college has been moderately active or very active in marketing and promoting the I-AM Project. The majority of the Project Leads indicated that, as a result of the I-AM Project, the community college has been able to expand efforts to market to

the community, the community college have had increased success in attracting students overall (see Figure 27), and it has had an overall positive impact on their community college.

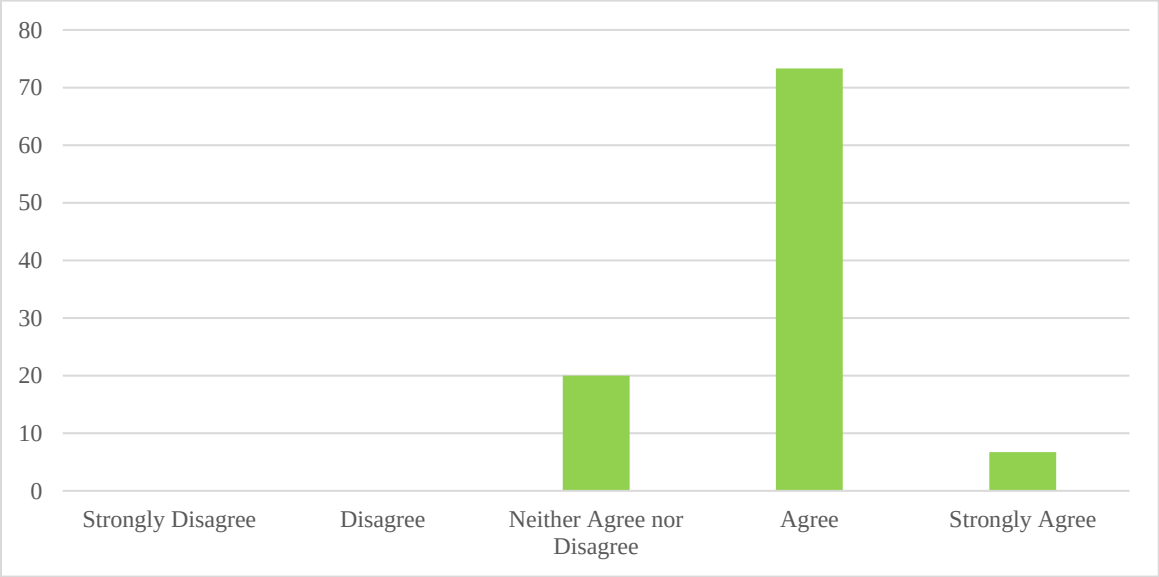

Figure 27. Agreement with Increased Success in Attracting Students Overall.

All Project Leads indicated Employer Partners have at least some to frequent involvement participating in regional and/or local advisor boards and/or Elevate Iowa, in providing input on curriculum, identification of occupational needs, providing access to company/business facilities for project meetings/training, and send employees to the community colleges for specialized or incumbent training, and assistance in identifying potential program instructors and faculty. Project Leads indicated Employer Partners provide tours of their facilities, company sponsored training, attend career fairs, provide internships, hire students prior to graduation, and provide scholarships/tuition/tuition reimbursement.

Project Leads were asked whether various aspects related to the modification/creation of the I-AM curriculum had a positive impact on students. The majority of the Project Leads indicated that the updated training facilities, the audited/aligned curriculum, the ongoing review of the curriculum, the certification of instructors, the development of AWS SENSE aligned curriculum, the development of career pathways, the shared core curriculum, and the enhancement/ development of the online and blended delivery options had a positive impact on students. All of the Project Leads indicated that their community college has a transcripting process in place for non-credit to credit at their community college (see Figure 28). The majority of the Project Leads also indicated that additional online and blended learning options are available at their community college due to the I-AM Project (see Figure 29).

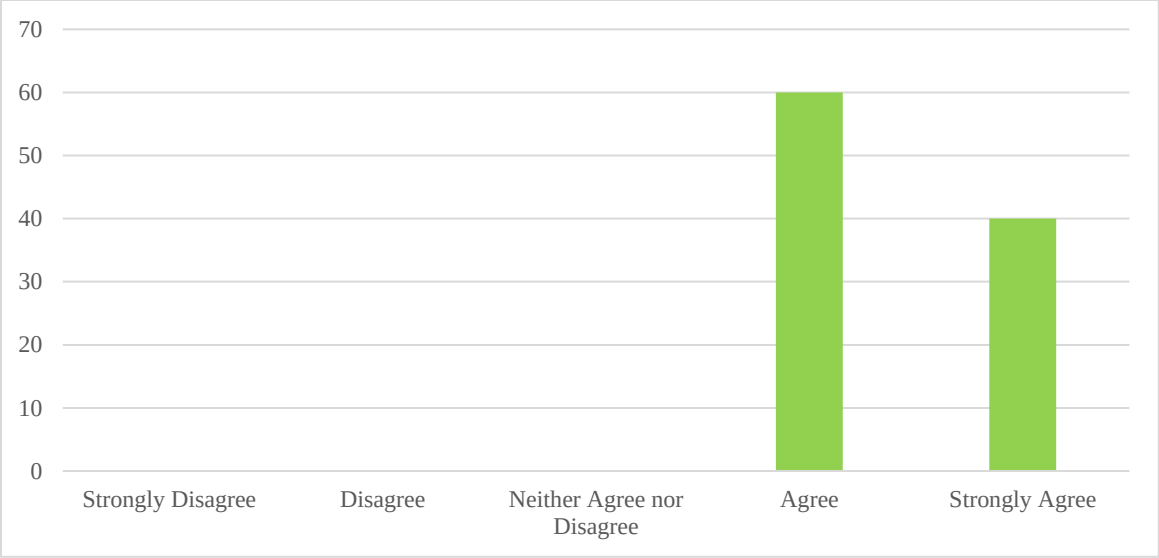

Figure 28. Percentage of Project Leads Indicating that a Transcripting Process was in Place for Non-Credit to Credit at their Community College.

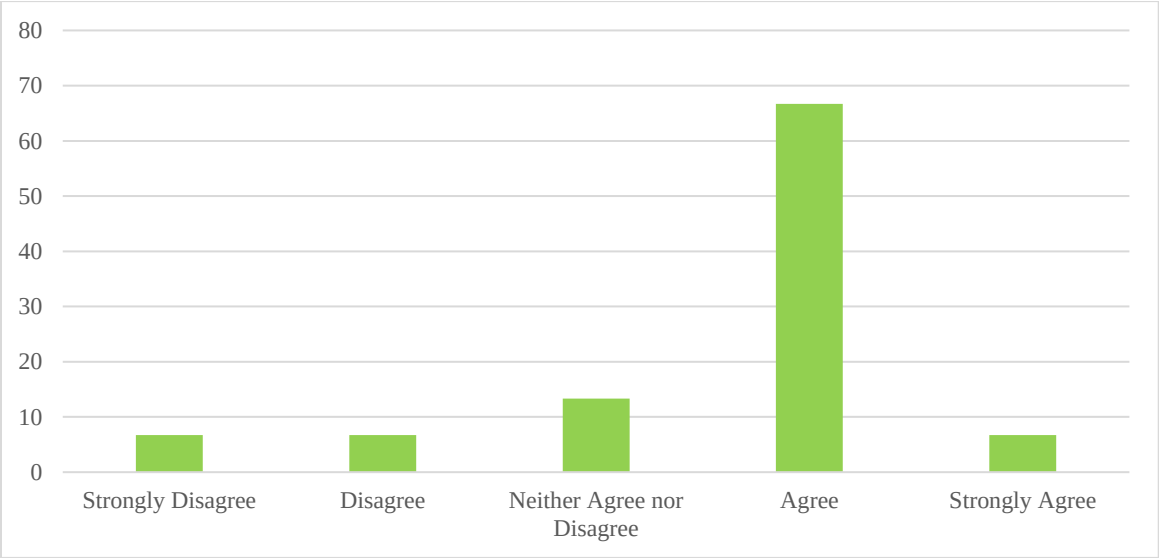

Figure 29. Percentage of Project Leads Indicating that Additional Online and Blended Learning Options Are Available at their Community College Due to the I-AM Program.

All Project Leads indicated that they thought the statewide administrative team was effective or very effective in the overall management of the I-AM Project, the I-AM Statewide Project overall, and in communicating with community colleges regarding deliverables. Project Leads

were asked whether various aspects of the I-AM Project will be sustained after the grant ends. The majority indicated that they thought the I-AM Project, overall, is sustainable at their community college after the grant ends (see Figure 30). Project Leads were asked to identify which components of the I-AM Project currently provided are sustainable. Half of the Project Leads indicated that all aspects of the project are sustainable and one-quarter indicated that the Accredited Testing Facilities (ATFs) for welding are sustainable.

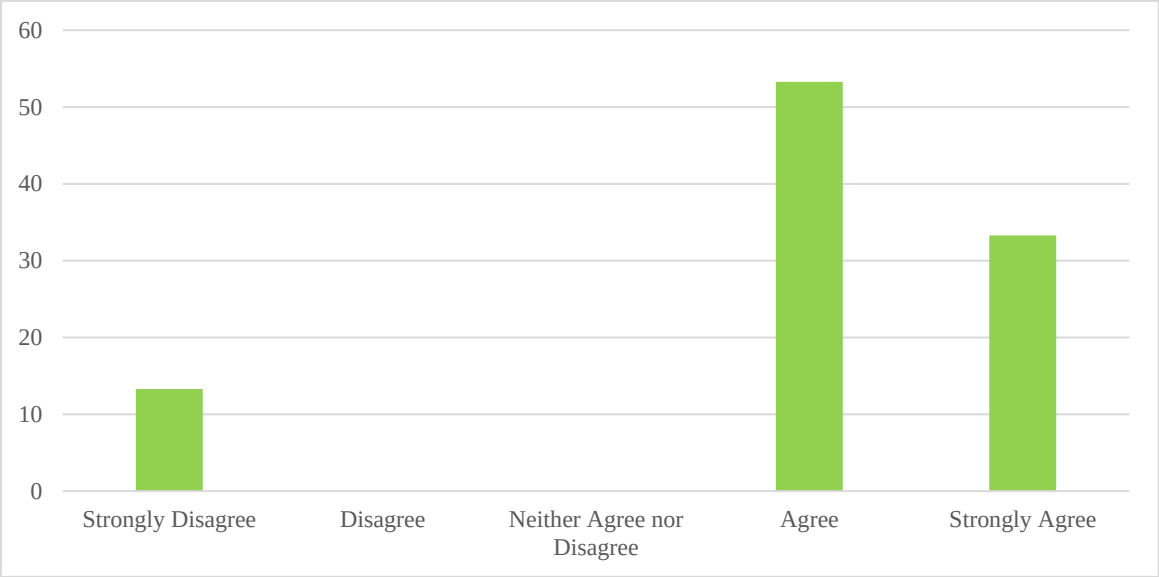

Figure 30. Percentage of Project Leads Agreeing that the I-AM Project at their Community College is Sustainable After the Grant Ends.

Almost all of the Project Leads indicated the I-AM grant funding has afforded their community college the opportunity to purchase or update equipment, have up-to-date facilities with equipment representative of what is used in industry, and train existing instructors. The majority of Project Leads indicated that aligning curricula with relevant industry recognized certifications strengthened their program and their ability to offer third party certifications is beneficial to students at their community college (see Figure 31). The majority of Project Leads indicated that the I-AM Project, overall, has had a positive impact on their community college (see Figure 32) and on their students.

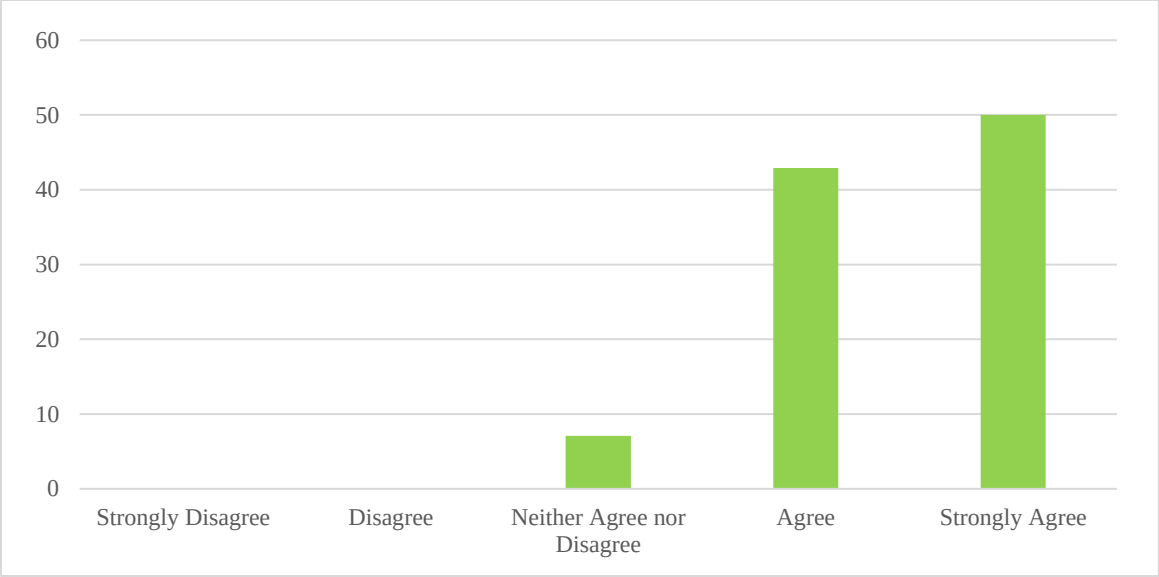

Figure 31. The Percentage of Project Leads Agreeing that Their Ability to Offer Third Party Certifications is Beneficial to Students at Their Community College.

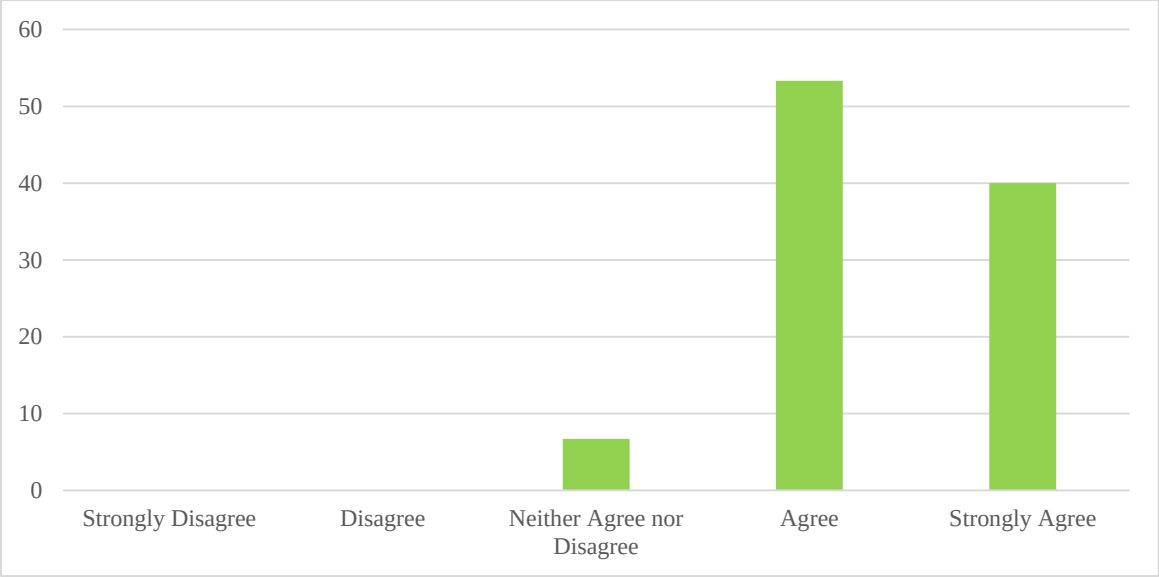

Figure 32. The Percentage of Project Leads Agreeing that the Advanced Manufacturing Program has had a Positive Impact on Their Community College.

The detailed reports are available in Appendices H through J.

Marketing Survey (distributed September 2014, October 2015)

October 2014 Distribution. The majority of respondents felt that their community college's regional marketing efforts were effective. Respondents indicated that their marketing campaigns were effective in targeting potential students, hosting career fairs and local events, and meeting industry's demand. The respondents were asked about the Elevate Iowa statewide marketing campaign. Overall, the majority of respondents indicated that the Elevate Iowa campaign was applicable to the target groups and that they thought the Elevate Iowa campaign was effective in marketing to these groups. Respondents agreed that the Lead Marketing Team at DMACC ensured that participants were aware of marketing requirements, providing necessary resources, and were available to answer questions.

October 2015 Distribution. Marketing respondents were asked to rate their community college's level of activity in marketing and promoting the I-AM program at their community college. The majority indicated their community college was moderately to very active and one-third reported that their community college was slightly to somewhat active (see Figure 33). Marketing respondents were asked to identify the groups targeted by their marketing campaign. Almost all indicated that they targeted unemployed individuals, underemployed and underrepresented populations, and veterans (see Figure 34). Respondents were also asked whether they agreed that their marketing campaign had had a positive impact on recruitment efforts of targeted populations. Over half agreed that their marketing campaign had a positive impact on underemployed and underrepresented populations, unemployed, and overall recruiting (see Figure 35). When asked how likely their community college is to continue marketing the I-AM program at the regional level, over two-thirds indicated it is likely they will continue to market the Advanced Manufacturing programs after the grant ends (see Figure 36).

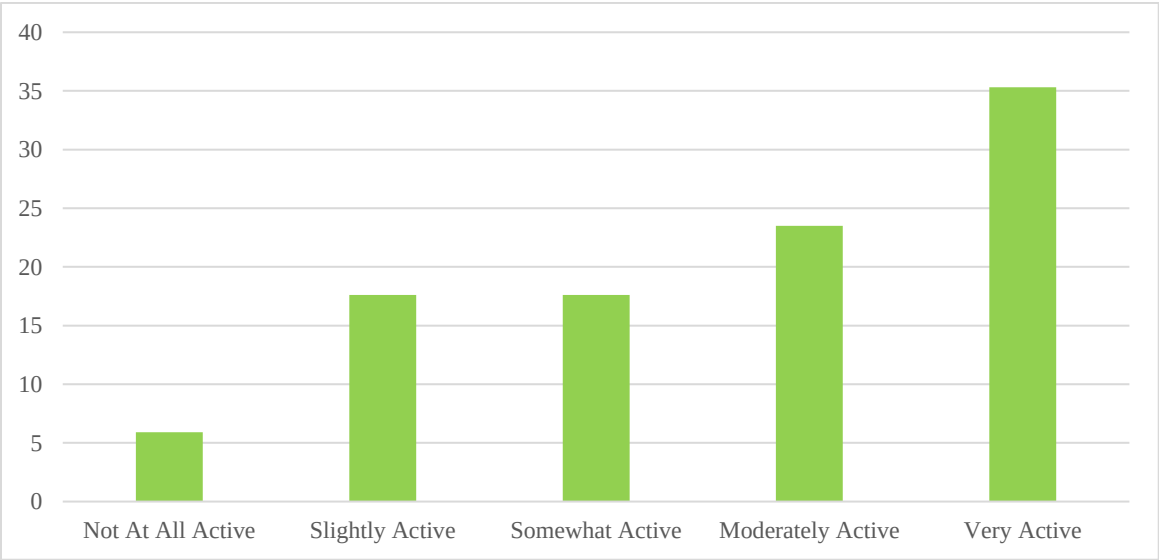

Figure 33. Community Colleges' Activity in Marketing and Promoting the I-AM Programs.

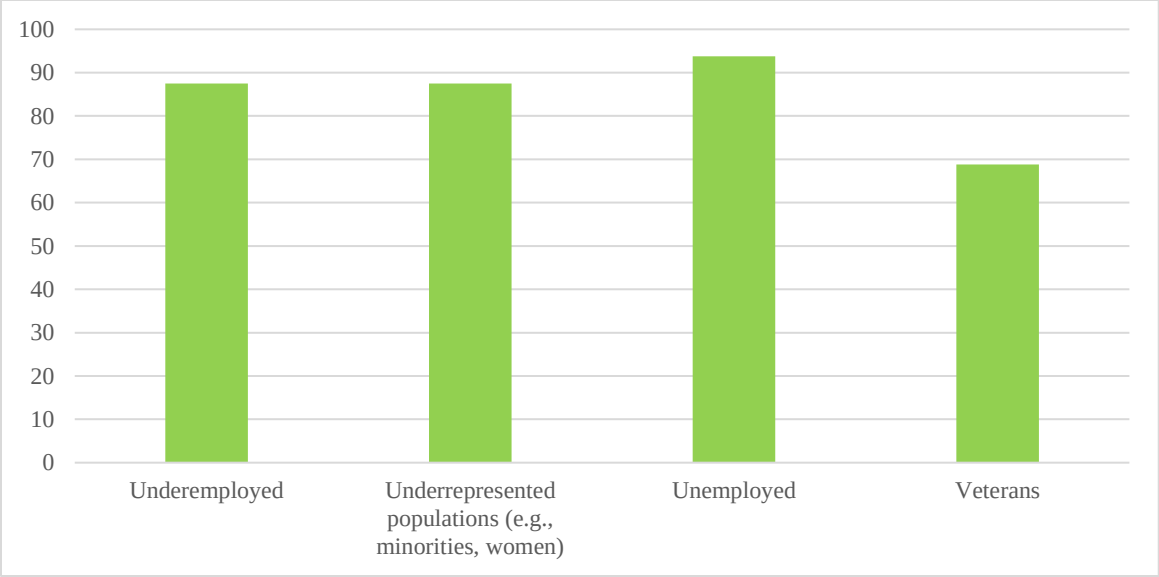

Figure 34. Groups Targeted by Each Community College's Regional Marketing Campaign.

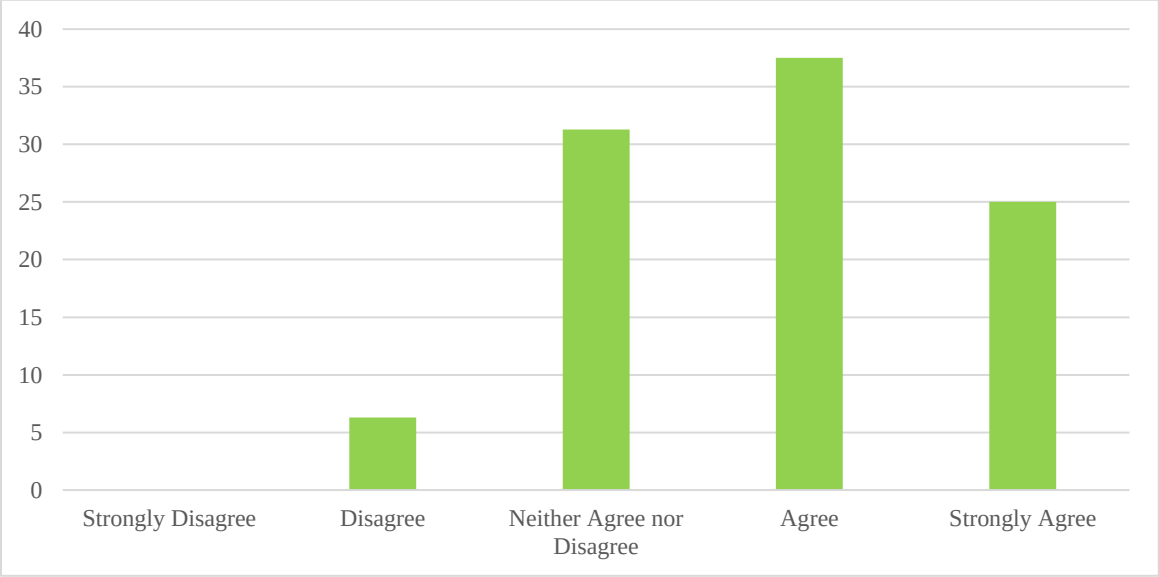

Figure 35. The Advanced Manufacturing Campaign Conducted by my Community College Has Had a Positive Impact On Recruitment Efforts.

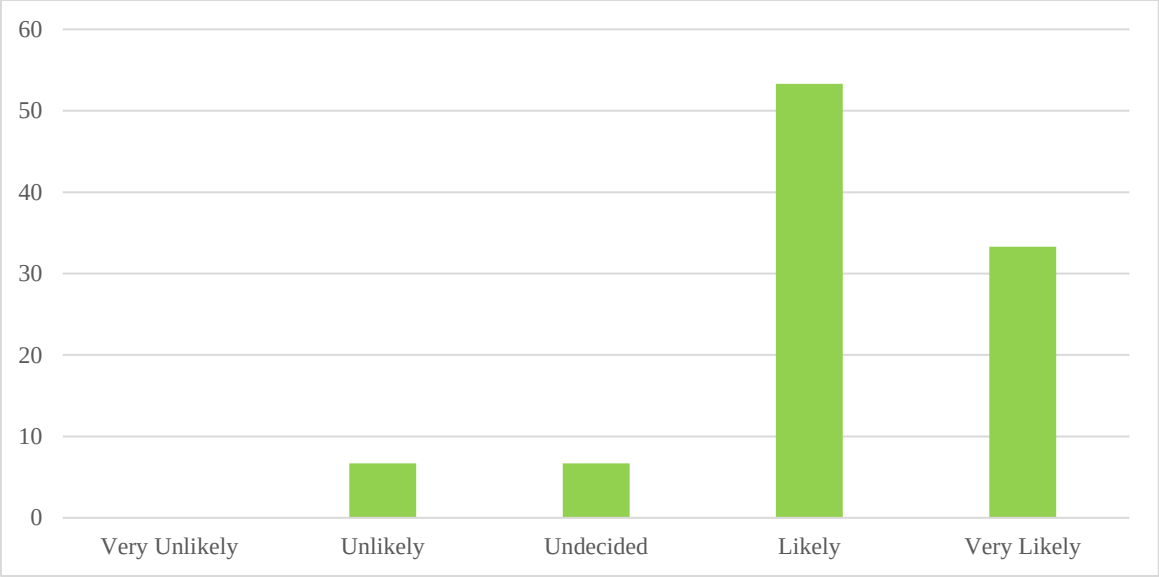

Figure 36. The Likeliness of Each Community College Continuing to Marketing Their Advanced Manufacturing Programs After the Grant Ends.

Marketing respondents were surveyed to determine their perceptions about the impact of the Elevate Iowa marketing campaign, conducted by the Lead Marketing Team at DMACC, on their community college. The majority agreed it had a positive impact on increasing awareness of Advanced Manufacturing in the state (see Figure 37). Overall, the majority of respondents indicated that their community college was satisfied with statewide marketing efforts. Almost all indicated the lead marketing team made sure they were aware of the marketing requirements, the lead marketing team was available to answer questions, the lead marketing team provided the needed resources, and the lead marketing team provided the necessary guidance.

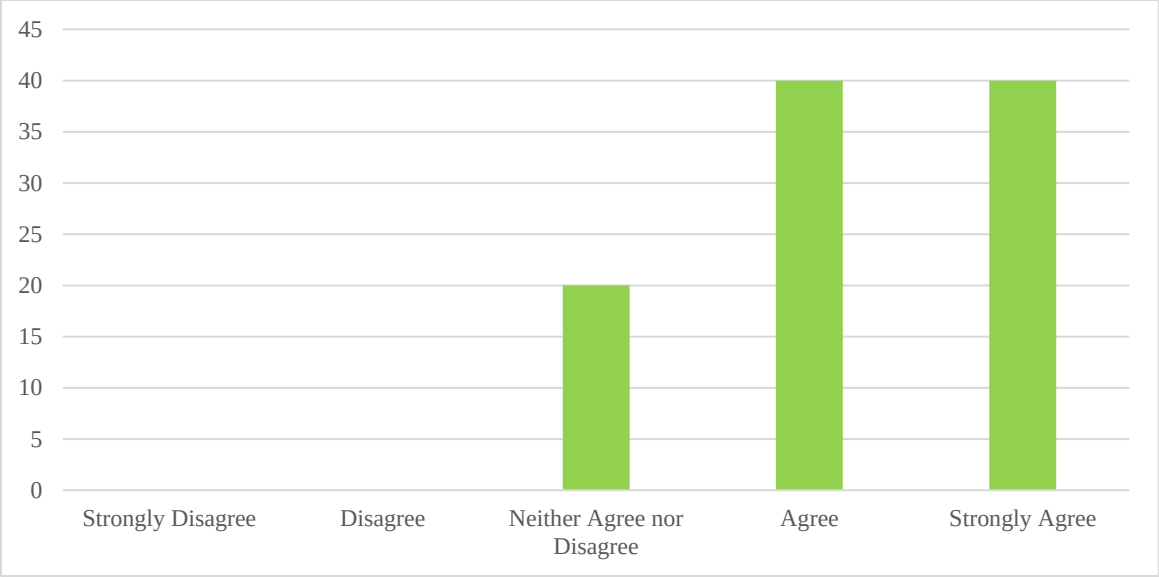

Figure 37. The Elevate Iowa Marketing Campaign Conducted by the Lead Marketing Team at DMACC Had a Positive Impact On Awareness of Advanced Manufacturing.

The detailed reports are available in Appendices K and L.

Employer Partner Survey (distributed November 2014, November 2015)

November 2014 Distribution. The majority of Employer Partners surveyed have collaborated with their partner community college(s) for two or more years. A majority of employers surveyed have hired between 0-5 I-AM Project participants. The majority of Employer Partners indicated that the I-AM Project met or exceeded their expectations with regards to students in the I-AM program, progress in producing needed workers, producing results, students' abilities upon graduating from program, and quality of hires. The majority of Employer Partners indicated that they offer internships, tours of their facilities, resume review, pay for tuition, and hire students to work before they graduate.

November 2015 Distribution. The majority of the Employer Partners reported that they had collaborated with the community college prior to the start of the project on October 1, 2012. Over the past three years, one-third of the Employer Partners indicated that they have hired between 1-5 students and another one-third indicated that they have not hired any students over the past three years (see Figure 38). About one-third reported that they currently have employees that are enrolled in an I-AM program at their partner community college.

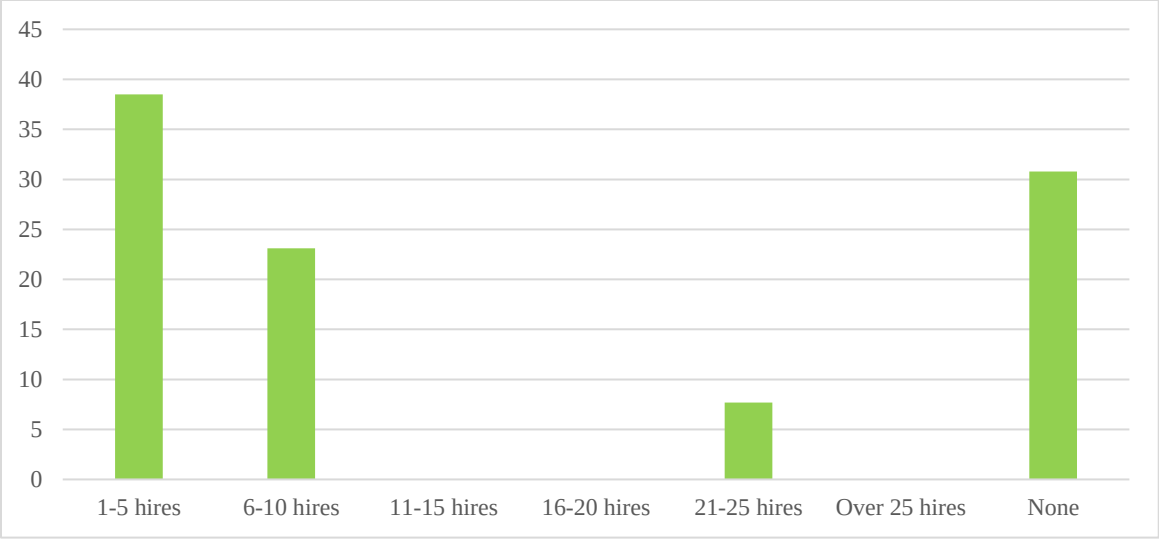

Figure 38. Number of Advanced Manufacturing Students Hired by Each Employer Partners.

Employer Partners were asked to rate their level of involvement in helping community colleges improve their program. The majority indicated they are somewhat to frequently involved in: regional and local sector boards, Elevate Iowa, curriculum input, identifying occupational needs, providing access to facilities for project meetings/training, and incumbent worker training. The majority of Employer Partners indicated that they offer internships, tours of their facilities, pay for tuition, hire students to work before they graduate, sponsor career fairs, and sponsor training (see Figure 39).

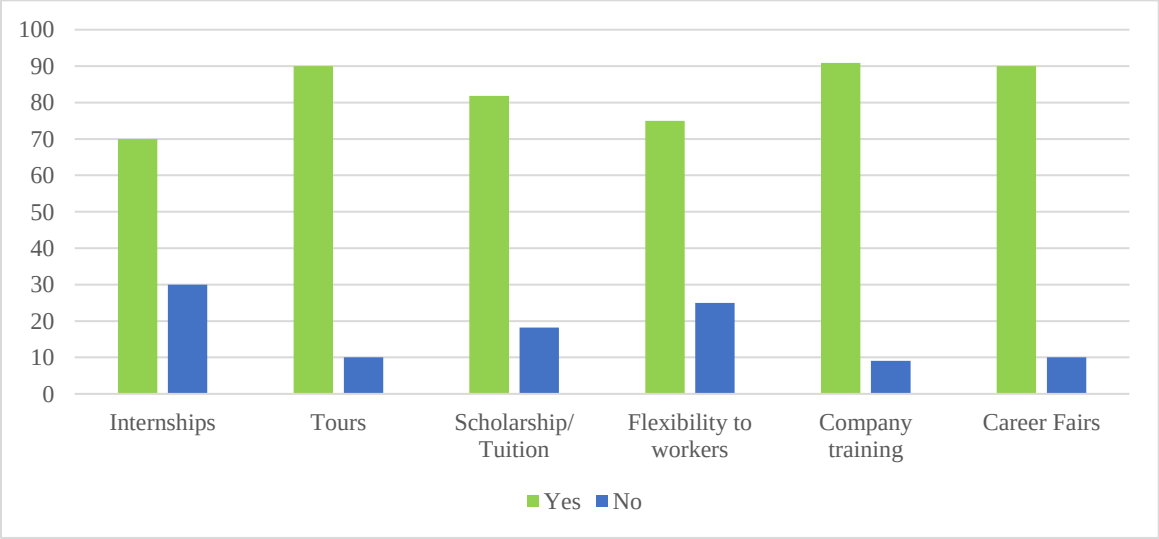

Figure 39. Select Opportunities Available to Students from Employer Partners (November 2015 Distribution).

The detailed reports are available in Appendices M and N.

Welding Faculty/Subcommittee Survey (distributed December 2014)

Almost all of the subcommittee members agreed or strongly agreed that the welding program is important to both students and the community college. Committee members' responses indicated that the community college were in various stages of completing the AWS SENSE alignment and the majority indicated that they were going to be implementing at least some of the SENSE aligned welding courses. Overall, the majority of the committee members felt that their community college had made adequate progress towards AWS SENSE alignment. The majority of committee members felt that the alignment was beneficial to students, beneficial to their community college, beneficial to local employers, and that it will better prepare students for the workforce.

Welding committee members were asked to share what they perceived to be the top three strengths of the collaborative SENSE core curriculum development process. Members identified the following strengths of the program: consistency among community colleges, transferability/establishment of courses/skills, and alignment. Committee members also identified several challenges to the process: getting people to agree on changes, time (e.g. attendance, implementing changes), everyone not being on the same level, and getting faculty at their community college to accept the changes being made.

The detailed report is available in Appendix O.

Faculty Survey (distributed April 2015)

Of the Faculty members who responded to the survey, the majority of the respondents reported their area of focus was Welding or Machining/CNC/Tool and Die. At the time of the survey, the majority of the respondents indicated they had worked on the project between two and three years. Almost all of the respondents indicated they have certifications in their field. Half have AWS certification and one-quarter have NIMS certification. The majority of the Faculty felt they were prepared to teach their courses. About half agreed that they had all of the equipment they needed and slightly under half agreed they had all of the resources needed to teach their courses. The majority of the faculty agree that students are making adequate progress through their classrooms. Faculty reported that they thought the top strengths of the program included its equipment, that it was backed and/or acknowledged by industry, it provided options to meet students' needs, and having skilled instructors. Other strengths included the consistency across community colleges, keeping the curriculum current and offering stacked credentials. Faculty also described challenges that they have encountered while working on the program. Some

challenges include trying to fit into the program; the extra amount of work and paperwork needed; costs of equipment, and perhaps not having the correct people in lead role positions.

The detailed report is available in Appendix P.

Committee Survey (distributed October 2014)

Committee members surveyed were asked to identify each committee they serve on. The committees surveyed were Curriculum Committee, Marketing Committee, Credit for Prior Learning Committee, Advising and Enrollment Committee, Digital Literacy Committee, and NCRC Committee. For the Advising and Enrollment Committee, the majority indicated the Tracking and Advising Model (which would later become the Intrusive Advising Model) was in progress or close to completion. For the Credit for Prior Learning Committee, the majority of the committee members indicated a high to very high level of contribution/active participation updating CPL processes. For the Curriculum Committee, committee members reported that they had a high to very high level of contribution/active participation in completing five of the committee's six deliverables: audited and aligned curricula, certified instructors, updated training facilities, shared core curriculum, and career pathways. For the Digital Literacy Committee, the majority reported a moderate to high level of contribution/active participation in completing the statewide digital literacy strategy. For the Marketing Committee, the majority of the respondents were familiar with the committee's three deliverables: statewide marketing plan, regional marketing plan, and employment and career website. For the NCRC Committee, by the time the survey was administered to NCRC Committee members, the committee had become less active and had discontinued meeting on a regular basis.

The detailed report is available in Appendix Q.

Credit for Prior Learning Committee Survey (distributed October 2015)

The Credit for Prior Learning (CPL) Committee members were asked whether their respective community colleges offered various Prior Learning Assessment practices. The majority of the respondents indicated they use CLEP, military transcript evaluation, non-credit to credit, test-out exams, Advanced Placement Exam, License or Credential for Credit, and Portfolio Review.

When asked whether their community college had made any changes to its CPL policies or practices as a result of the I-AM Project, the majority of the members reported that they had made either minor, moderate, or extensive changes (see Figure 40). When asked whether the updated CPL practices were impactful, the majority indicated it had a positive impact on students and on their community college.

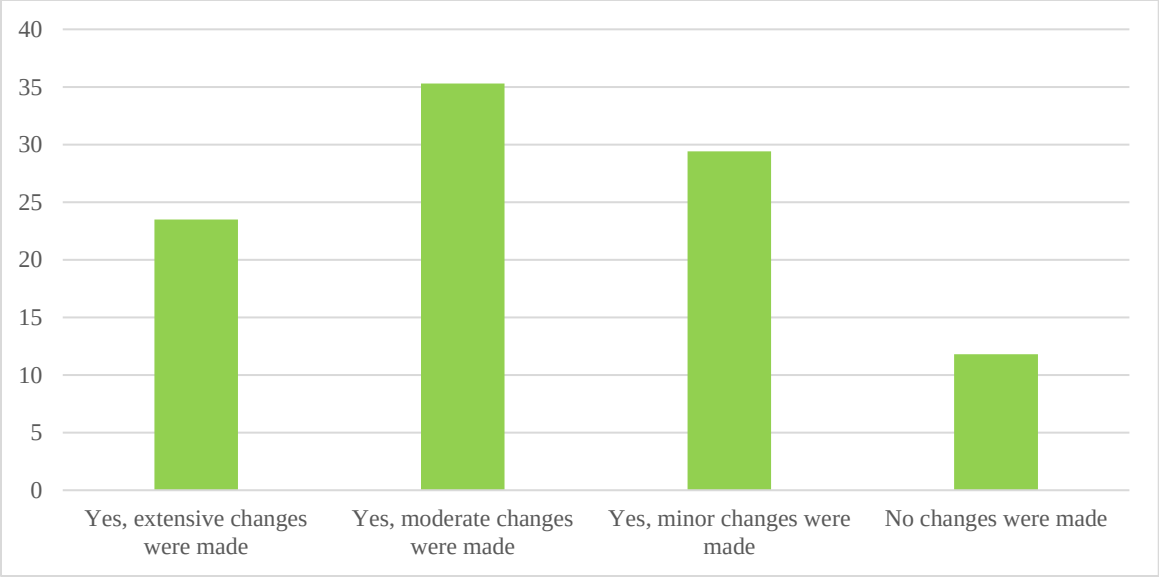

Figure 40. Percent Indicating Changes Were Made to CPL Policies and/or Practices at Their Community College

The detailed report is available in Appendix R.

Advising and Enrollment Committee, Career Navigator Survey (distributed October 2015)

The Advising and Enrollment Committee members were asked a series of questions regarding the Intrusive Advising Model/Approach developed by their committee. Respondents were asked to describe how the Intrusive Advising Model/Approach was utilized at their community college. The majority of respondents indicated that the Intrusive Advising Model/Approach was being implemented in its entirety or partially (see Figure 41). Overall, respondents agreed that the Intrusive Advising Model is easy to use, is a useful tool (see Figure 42), has had a positive impact on student recruitment and retention, has had a positive impact on student completion, has had a positive impact on their community college, and is sustainable.

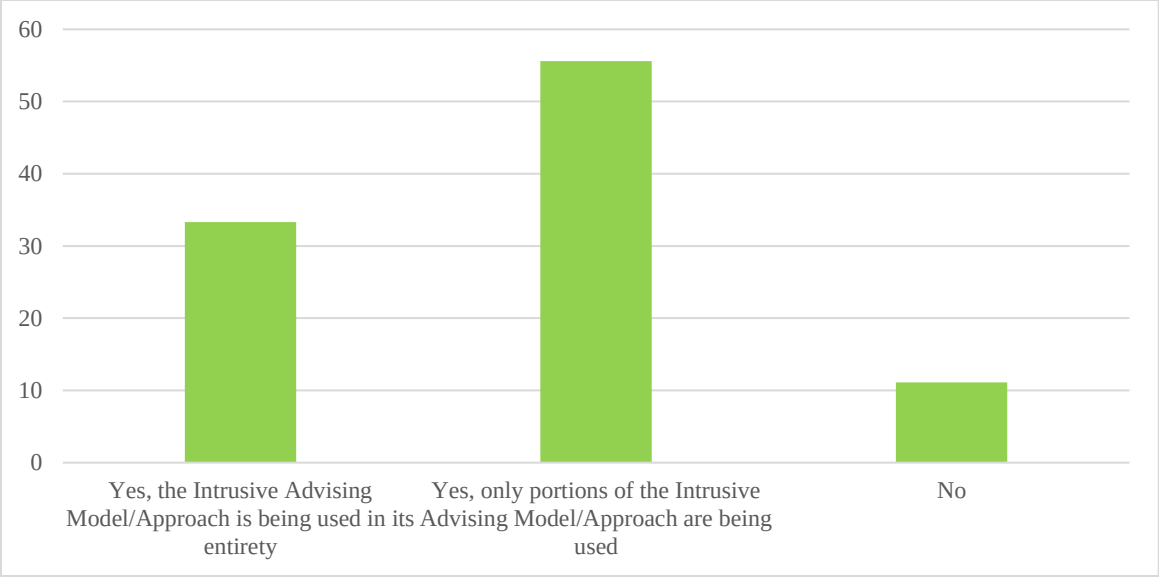

Figure 41. Use of the Intrusive Advising Model/Approach Developed by the Advising and Enrollment Committee.

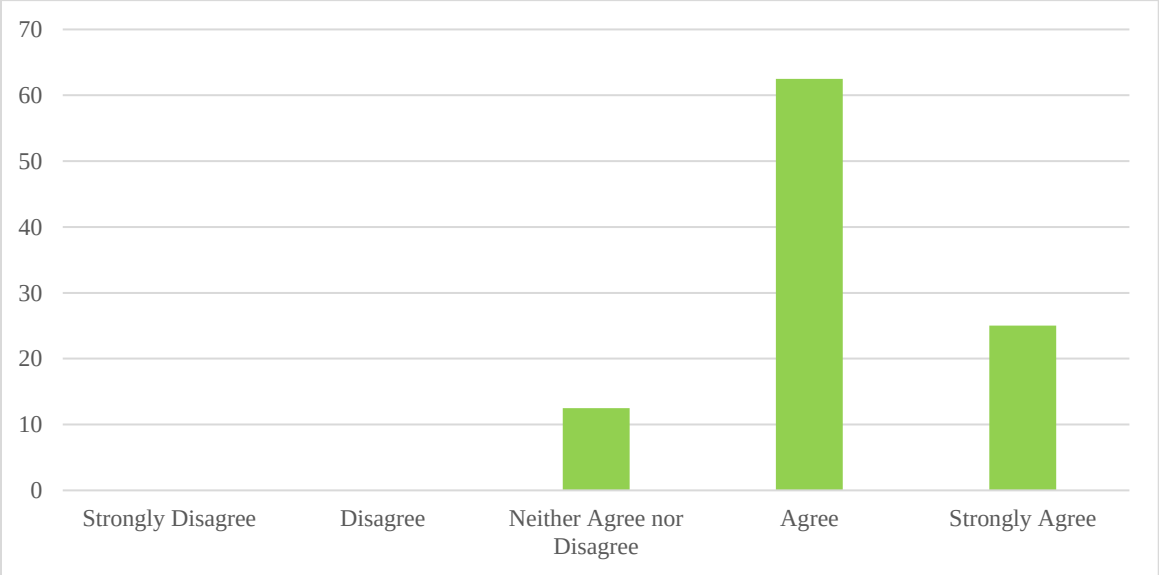

Figure 42. Respondents' Agreement with the Intrusive Advising Model/Approach is a Useful Tool.

The Career Navigators/Success Coaches/Advisors were also asked a series of questions. The majority of advisors indicated that they were responsible for providing academic

advising/registration, help with career placement, assist students by linking them to needed resources, and help with tuition assistance. Advisors were asked to estimate the frequency with which they provide information about various services (e.g., NCRC) to students. The majority of the advisors indicated that they provided information about the NCRC assessment to students all or some of the time (see Figure 43). The majority of advisors indicated that they rarely provide information to their students regarding Credit for Prior Learning. However, all advisors indicate that they provide information to students regarding third party certifications.

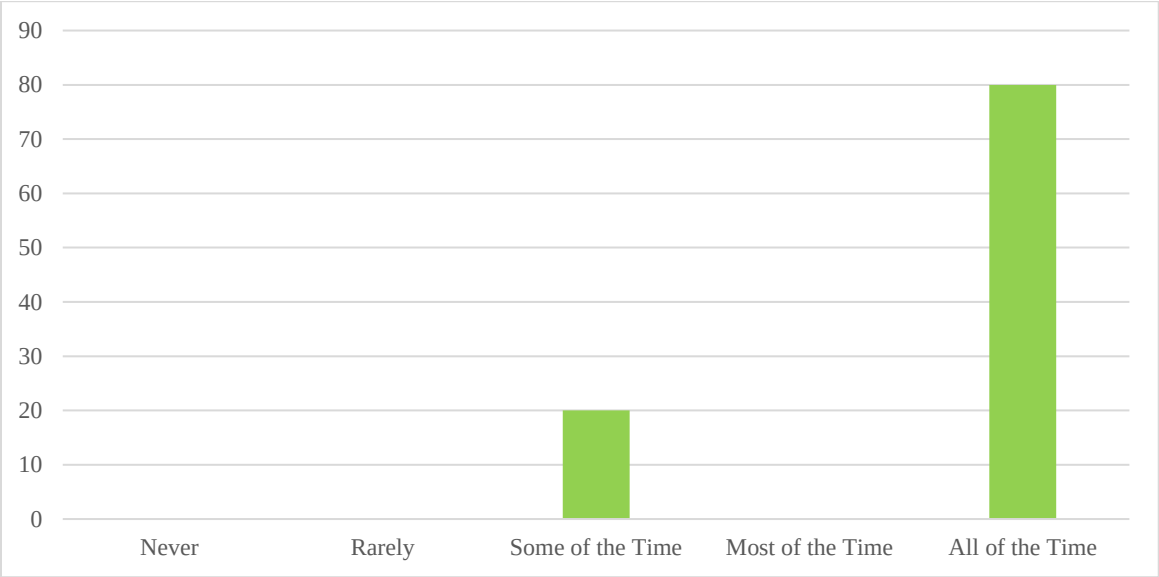

Figure 43. Amount of Time an Advisor Provides Information Regarding NCRC to Students.

The detailed report is available in Appendix S.

Curriculum Committee, Faculty Survey (distributed February 2016)

The respondents were asked to indicate their contribution to curriculum revisions. Over half of the respondents indicated they contributed/participated highly or very highly in the development of modification of the I-AM curriculum at their community college (see Figure 44). The respondents reviewed the curriculum changes, helped plan or develop the curriculum, and/or implemented the curriculum changes. The majority of the respondents indicated the Advanced Manufacturing program has had a positive impact on students and on their community college.

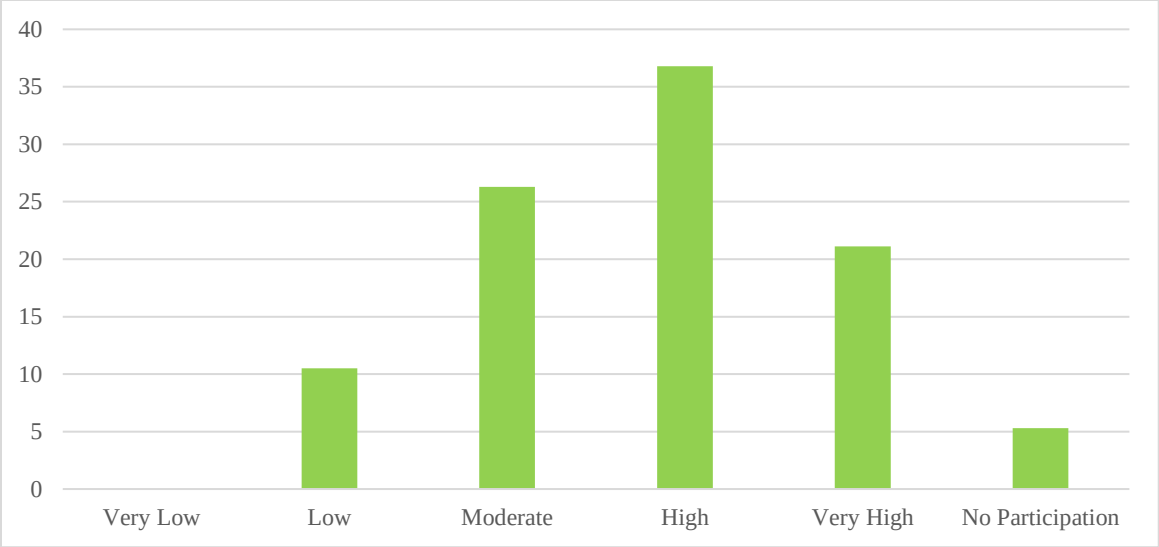

Figure 44. Level of Curriculum Committee and Faculty Contribution/Participation in the Development or Modification of the I-AM Curriculum.

The Advanced Manufacturing Faculty were asked about the I-AM strategies. The majority indicated they have incorporated more technology-enabled learning activities into their classroom since the start of the grant (see Figure 45), their department/program has developed strong relationships or has enhanced existing relationships with employer partners, and that most of the students are adequately prepared to learn in their classroom.

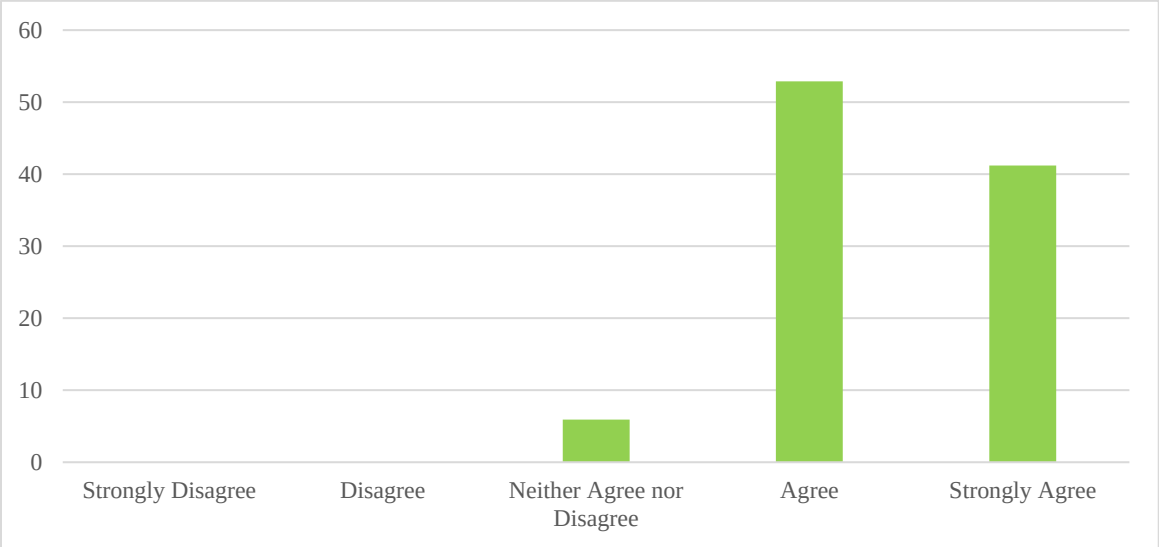

Figure 45. Faculty Members Who Have Incorporated More Technology-Enabled Learning Activities into Their Classroom Since the Start of the I-AM Project.

The Faculty members who participated in the Welding Subcommittee were asked about the implementation of the statewide welding curriculum at their community college. Half indicated their community college has implemented at least one welding course developed by the welding subcommittee and one-third indicated they would not implement any course developed by the welding subcommittee (see Figure 46). Overall, the welding subcommittee members learned a great deal about determining appropriate lecture/lab ratios and credit hours for courses, AWS SENSE competencies, AWS qualification requirements, AWS certification requirements, and developing an AWS SENSE aligned program.

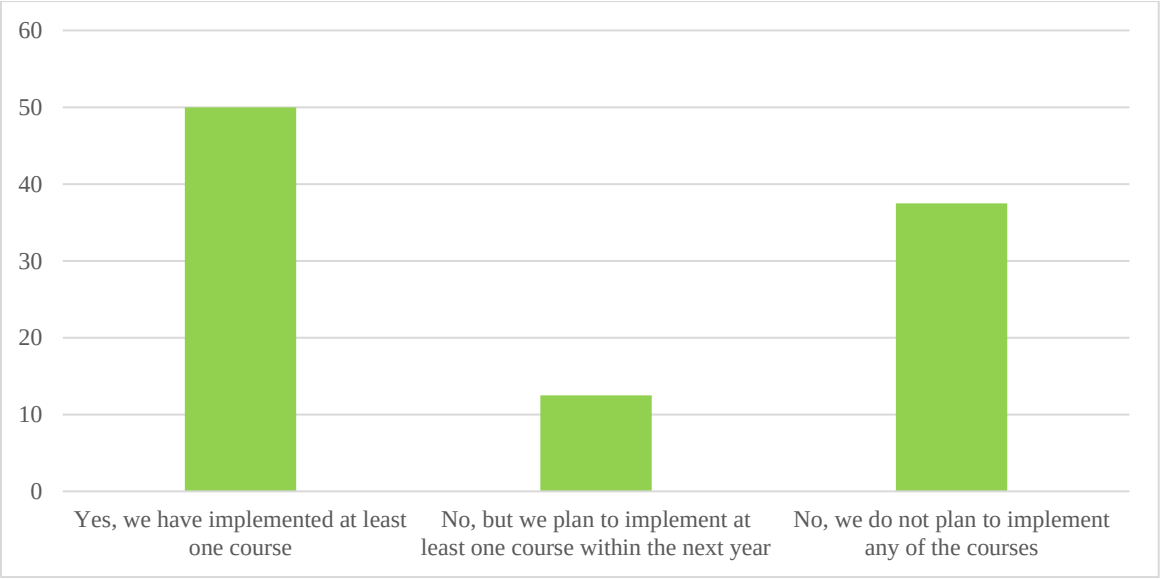

Figure 46. Implementation of the Statewide Welding Curriculum Developed by the Welding Subcommittee.

Almost all of the Curriculum Committee members indicated their community college has been actively engaged in the ongoing review of the curriculum, the updating of training facilities, the certification of instructors, and the development of career pathways. Almost all of the Curriculum Committee members indicated the updating of training facilities, the ongoing review of the curriculum (see Figure 47), the certification of instructors (see Figure 48), and the development of career pathways had a positive impact on students at their community college.

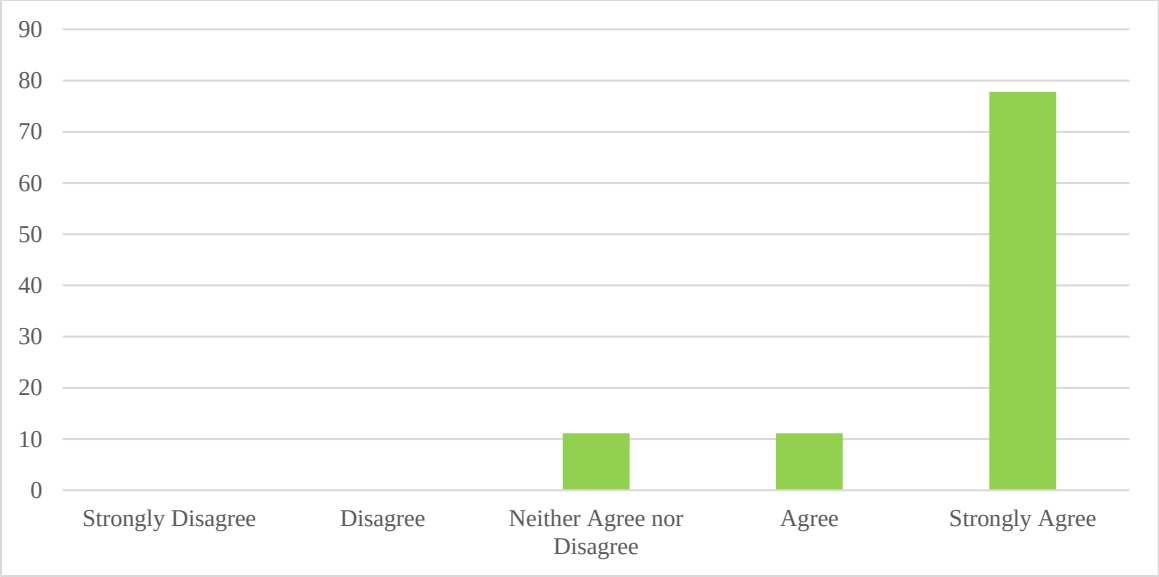

Figure 47. The Curriculum Committee Members' Agreement on The Ongoing Review of Curriculum's Positive Impact on Students.

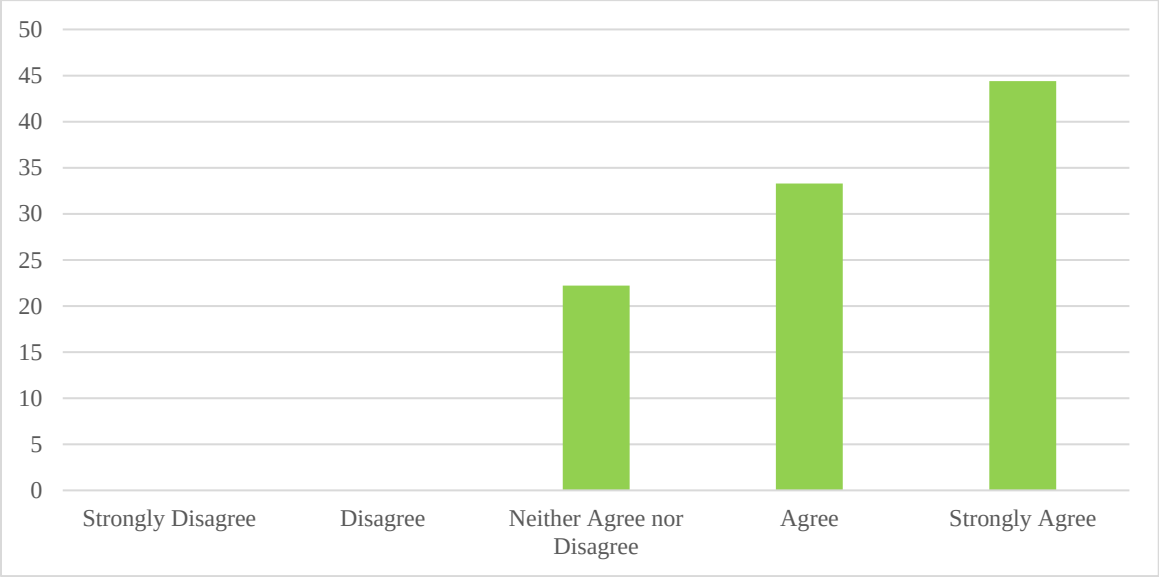

Figure 48. The Curriculum Committee Members' Agreement on the Certification of Instructors' Positive Impact on Students.

The detailed report is available in Appendix T.

College Leadership Survey (distributed February 2016)

The majority of the leadership agreed that the grant provided opportunities to update/improve facilities, purchase or update facilities, train existing instructors, strengthen existing partnerships with industry and local businesses, increase advanced manufacturing program-specific marketing, increase the number of students (see Figure 49), and increase the retention of students. The majority of the respondents also agreed that relationships their community college held with industry/employer partners had strengthened as a result of the project (see Figure 50).

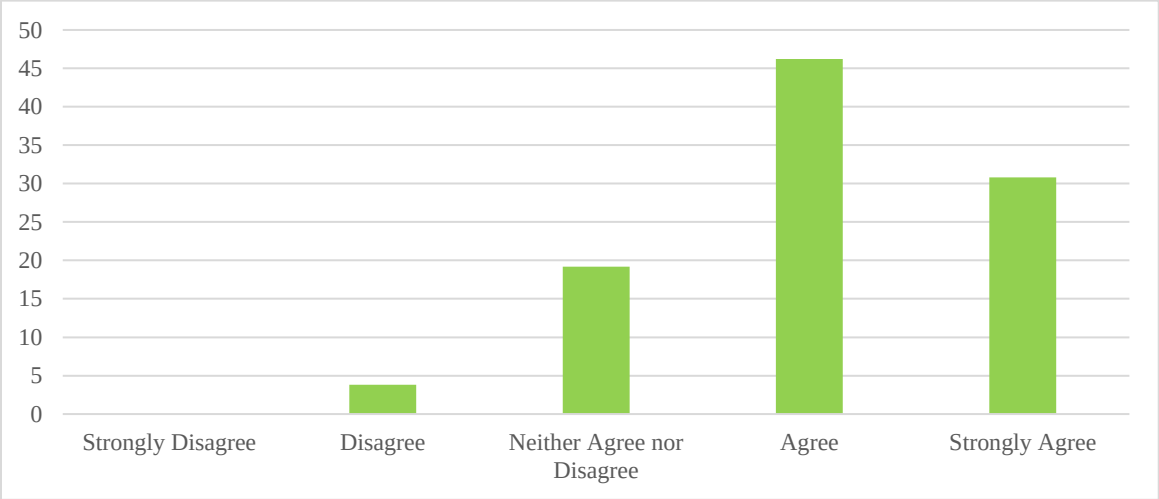

Figure 49. College Leadership's Agreement with the I-AM Project Increasing the Recruitment of Students.

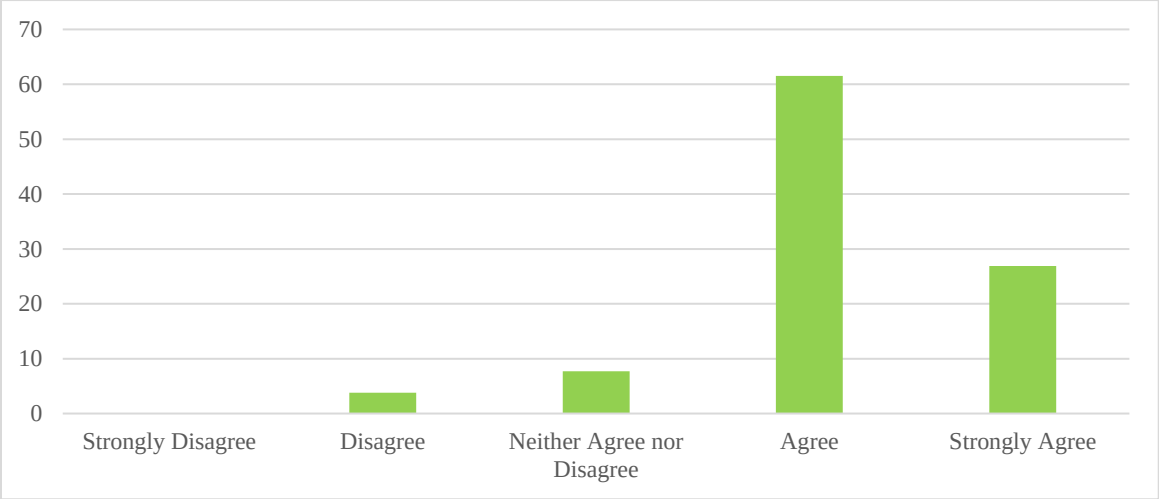

Figure 50. College Leadership's Agreement with Relationships with Industry/Employer Partners Have Strengthened as a Result of the Project.

The majority of the college leadership indicated both faculty and department chairs/deans were willing to fully implement the revised I-AM curriculum. Community college leadership representatives were asked to rate the effectiveness of the statewide administrative team in its overall management of the I-AM Project. Overall, 100% of the respondents reported that the I-AM Project has been effective and all of the respondents reported that the statewide administrative team was effective in their management of the project (see Figures 51 and 52).

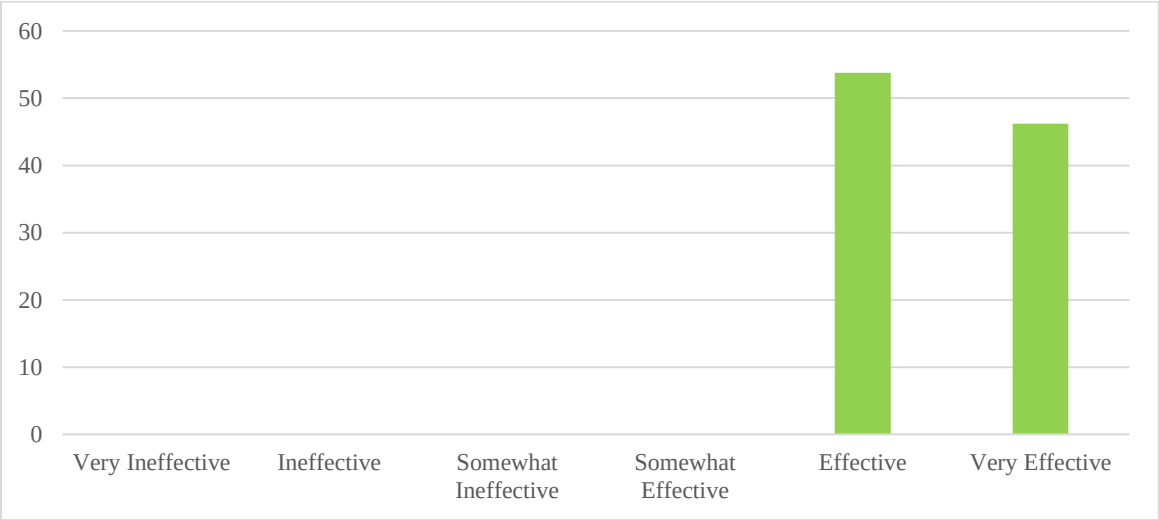

Figure 51. College Leadership's Indication on the Effectiveness of the I-AM Project.

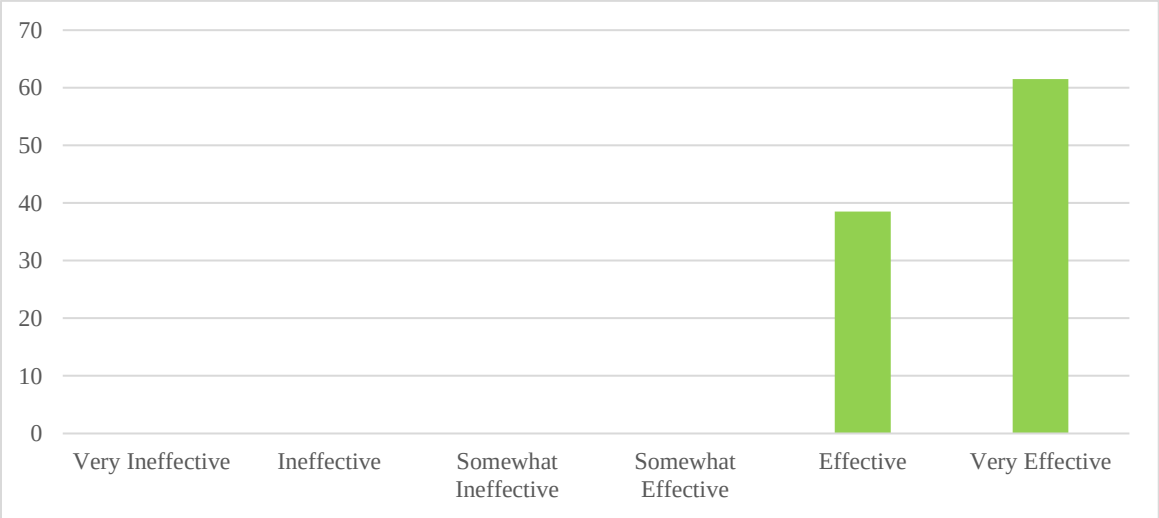

Figure 52. College Leadership's Indication of the Effectiveness of the Statewide Administrative Team in Managing the I-AM Project.

College leadership representatives were asked what plans their respective community colleges have for sustaining the I-AM program. The respondents indicated that the project will be sustained through its operating budget, enrollment will be used to determine sustainability, and continue their partnerships with industry, among other plans. When asked to share their thoughts on lessons learned related to what worked, things that should change, college leadership reported that the project worked well, however, it took time to assemble an effective team, that a grant coordinator was needed, and that alignment of the curriculum was important. Some respondents indicated that it was difficult to bring new instructors up to speed and that perhaps a gap analysis should have been conducted at the beginning of the project.

The detailed report is available in Appendix U.

I-AM PROGRAM PARTICIPANTS

A total of 3,348 unique participants enrolled in I-AM signature programs between 2012 and 2016 reflecting 123% of the projected number of participants (see Table 11). Of these, 3,021 resided in Iowa (see Figure 53; see Appendix V for the distribution of participants by community college) with the remainder residing in neighboring states (e.g., Nebraska, Illinois). Approximately 8% of the total unique participants were female, 10% were Veterans, 80% were White, and 59% were enrolled as credit students (see Figures 54, 55, 56, respectively).

Employed and Incumbent Workers. At enrollment, 58.40% of I-AM participants were employed and 32.52% of the I-AM participants were incumbent workers (based on the U.S. DOL, TAACCCT grant definition for incumbent workers). Of the students employed at the time of intake, 53.31% resided in Iowa (see Figure 57). Notably, 1,537 participants employed at enrollment received an increase in wages post-enrollment (see Table 11, Item 10), reflecting a 171% increase over the projected goal of 899 workers that received a wage increase post-enrollment.

College-Issued Credentials and Third Party Certificates. A total of 1,982 participants completed 55,986 credit hours in I-AM signature programs. While the number of participants earning credit hours reflects 83% of the projected goal, the number of credit hours completed is impressive (see Table 11). A total of 2,664 college-issued credentials were awarded to participants, of which, 2,423 college-issued credentials were awarded to Iowa residents (see Table 12, Figures 58-61). It is important to note that the number of college-issued credentials earned by I-AM participants reflects 136% of the projected goal (see Table 11).

In terms of participants, 2,145 participants including 1,866 that were Iowa residents, earned at least one college-issued credential and/or third party certification (see Figure 62). Also notable is the number (n=550) of students pursuing further education after completing their program of study. This total number reflects 188% of the original projected goal of 292 students (see Table 11).

Table 11.
Outcomes Measures for the I-AM Project as of August 1, 2016

Participant Outcome	**Goal**	**Actual Outcomes**	**% of Goal Met**
1. Unique Participants Served/Enrollees	2,728	3,348	123%
2. Total Number of Participants Who Have Completed a Grant-Funded Program of Study	1,676	1,876	112%
2a. Total Number of Grant-Funded Program of Study Completers who are Incumbent Workers	--	1,089	--
3. Total Number Still Retained in Grant Funded Programs of Study	851	455	53%
4. Total Number Retained in Other Education Programs	--	237	--
5. Total Number of Credit Hours Completed	--	55,986	--
5a. Total Number of Students Completing Credit Hours	2,382	1,982	83%
6. Total Number of Earned Credentials (Aggregate across all enrollees)	1,961	2,664	136%
6a. Total Number of Students Earning Certificates-Less than One Year	--	1,278	--
6b. Total Number of Students Earning Certificates-More than One Year	--	655	--
6c. Total Number of Students Earning Degrees	--	222	--
7. Total Number Pursuing Further Education After Program of Study Completion	292	550	188%
8. Total Number Employed After Program of Study Completion	1,478	428[2]	29%
9. Total Number Retained in Employment After Program of Study Completion	1,333	327[3]	25%
10. Total Number of Those Employed at Enrollment Who Receive a Wage Increase Post-Enrollment	899	1,537[4]	171%

Table 12.
Number of College-Issued Credentials earned by I-AM Participants

College-Issued Credential	All Participants	Participants Residing in Iowa
Non-credit certificate	1,025	943
Credit certificate	739	687
Diplomas	673	589
Associates' Degree	227	204
Total	2,667	2,423

[2] Data available for a total of 574 participants by the end of year 3. Percentage based on 574 participants is 75%
[3] Data available for a total of 386 participants by the end of year 3. Percentage based on 386 participants is: 85%
[4] Data available for a total of 1,860 participants by the end of year 3. Percentage based on 1,860 participants is: 83%

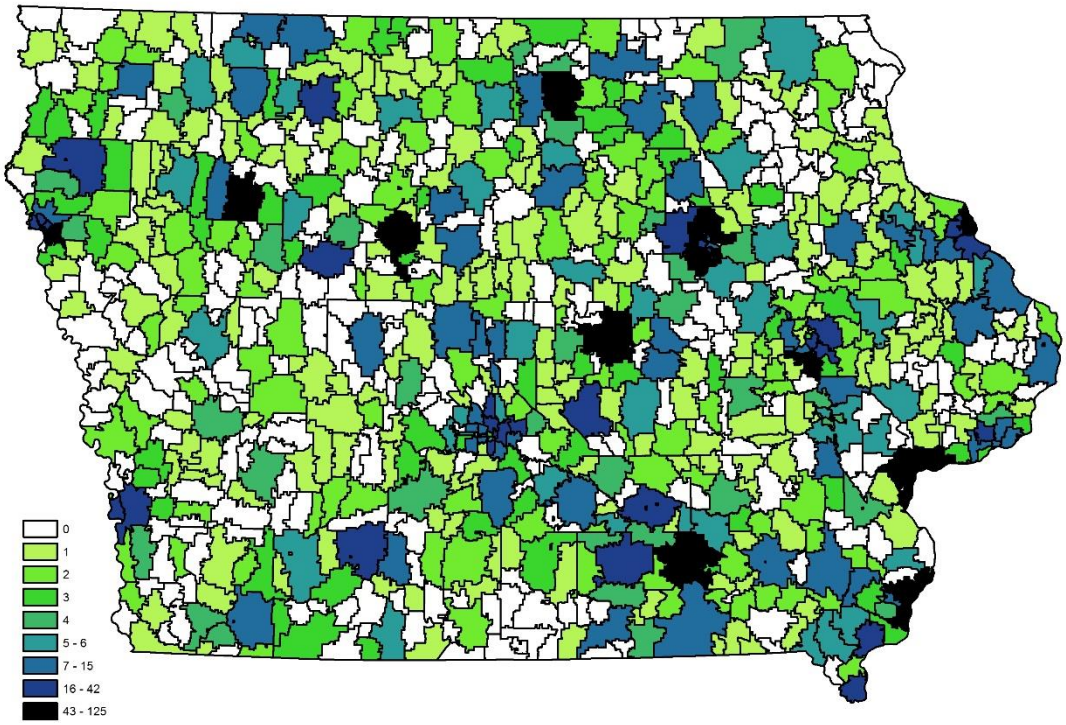

Figure 53. Distribution of ***all*** I-AM Participants by Iowa Zip Code.

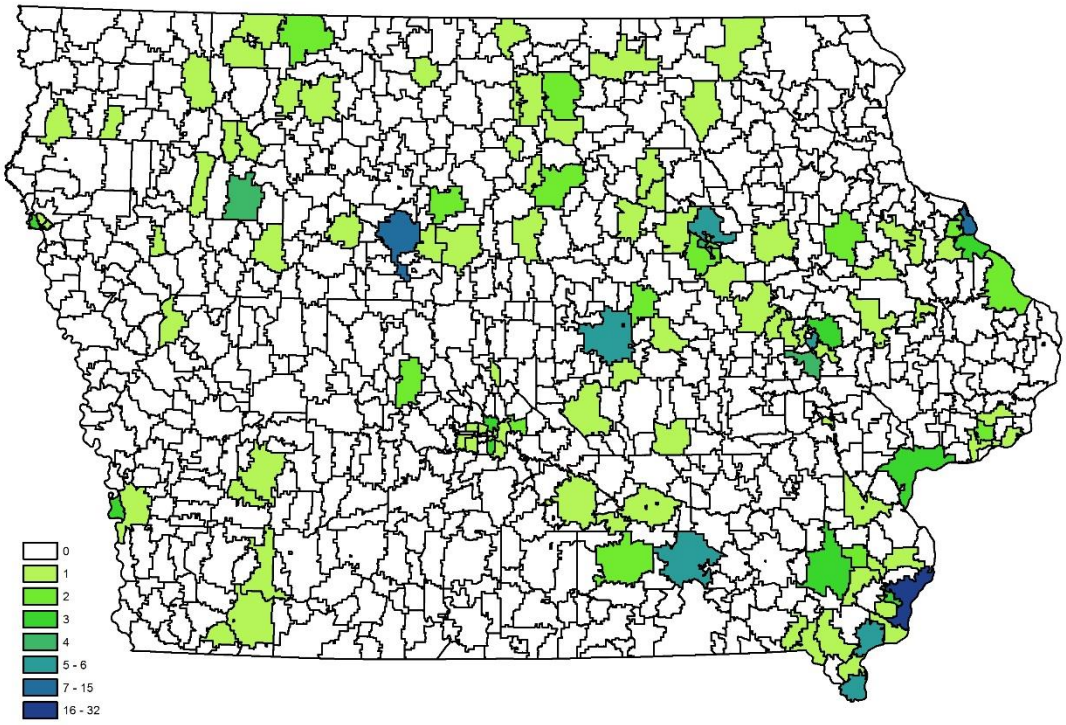

Figure 54. Distribution of ***Female*** I-AM Participants by Iowa Zip Code.

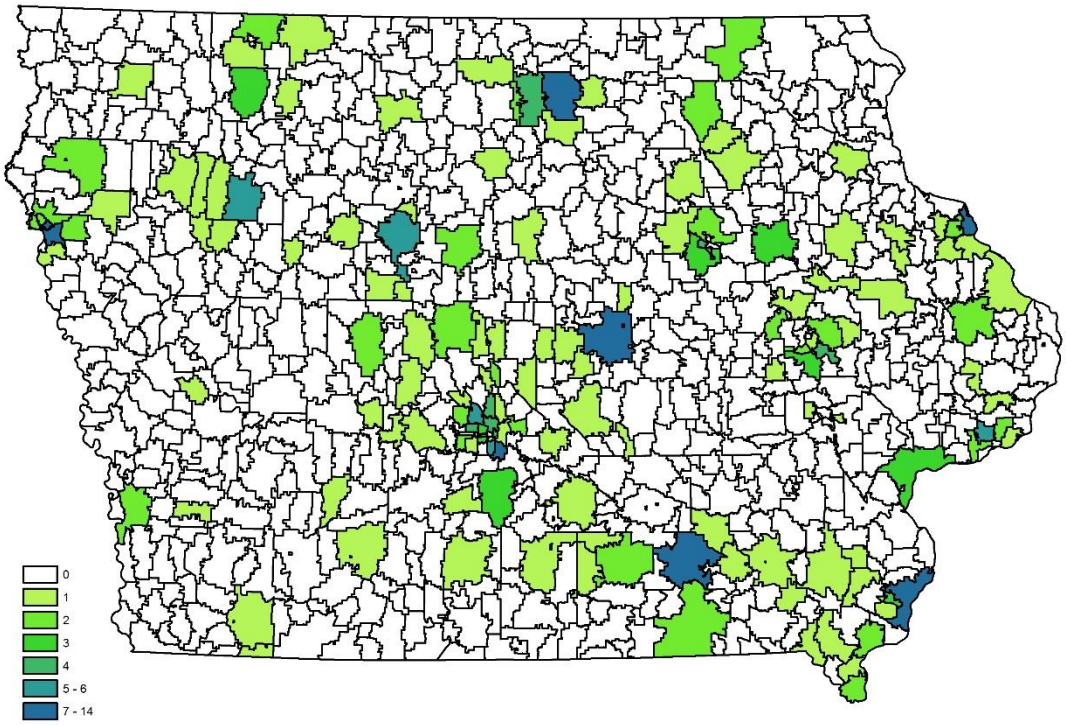

Figure 55. Distribution of I-AM Participants with ***Veteran*** Status by Iowa Zip Code.

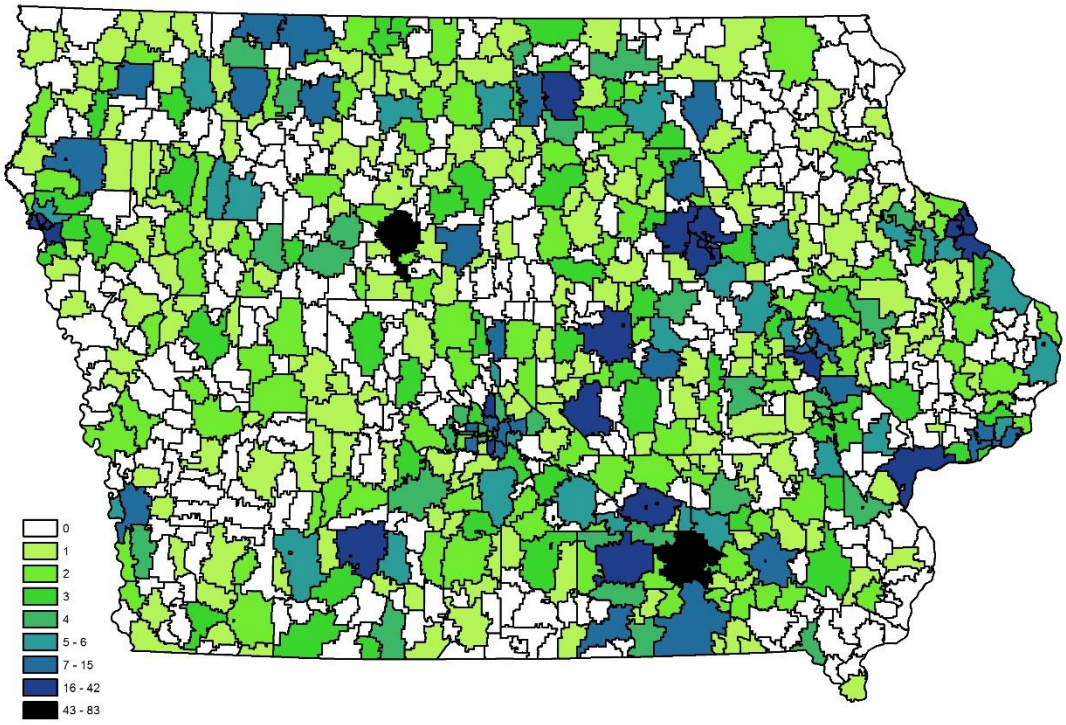

Figure 56. Distribution of I-AM Participants ***Enrolled in Credit Programs*** by Iowa Zip Code.

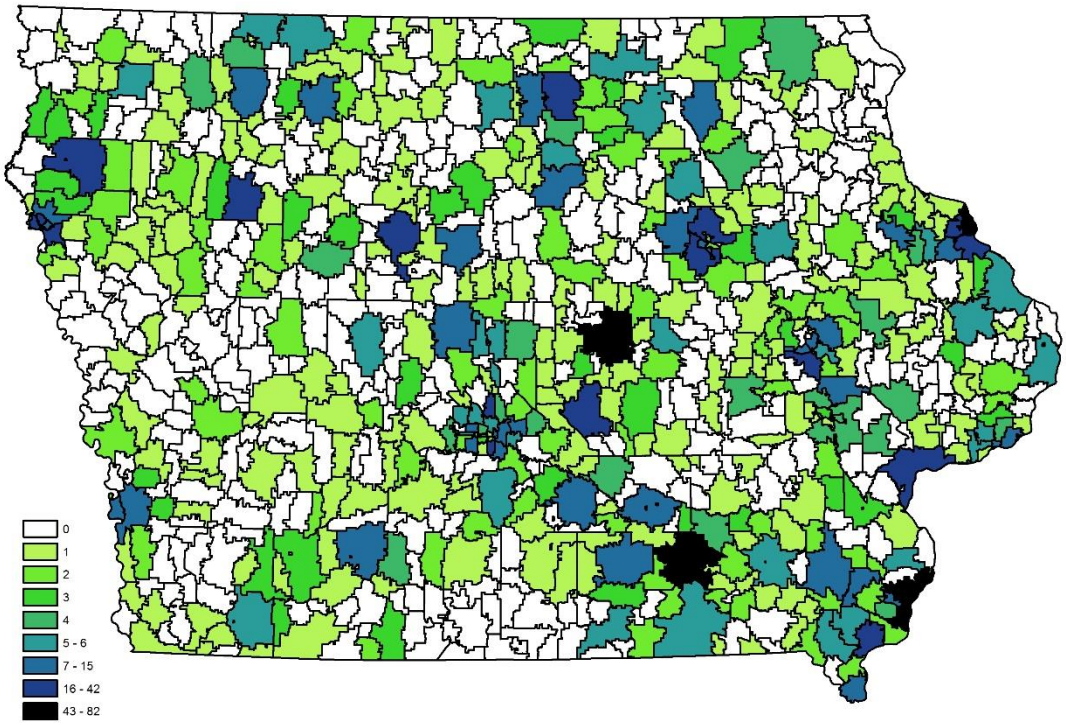

Figure 57. Distribution of I-AM Participants *Employed at the Time of Intake* by Iowa Zip Code.

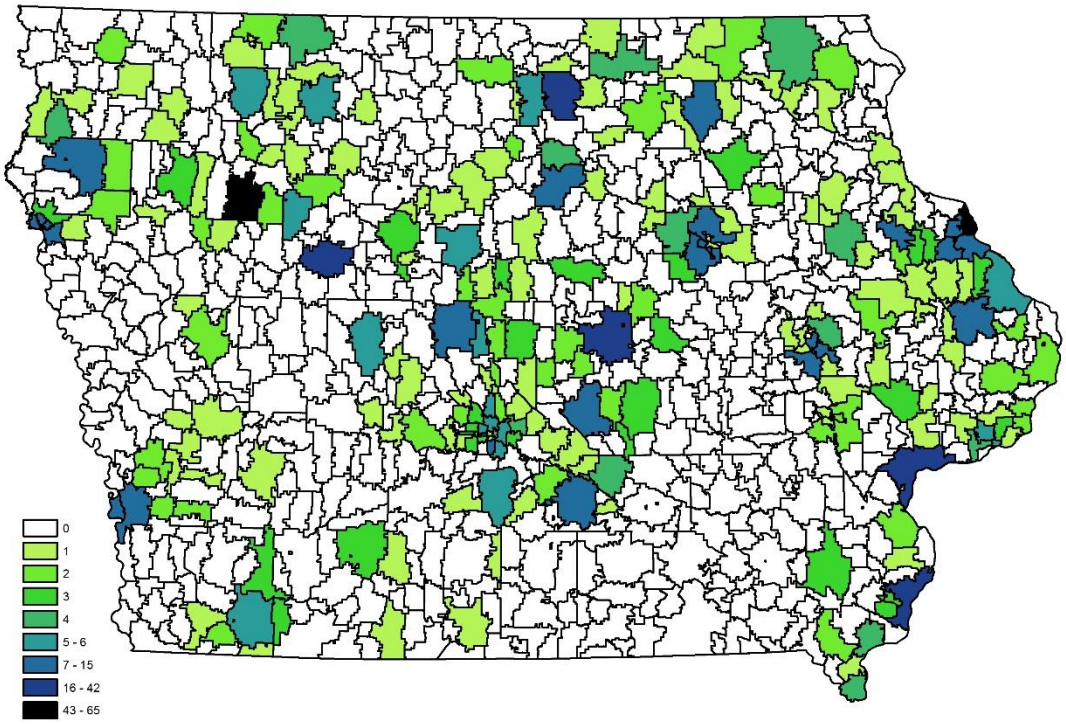

Figure 58. Number of Non-Credit Certificates Issued by Iowa Zip Code.

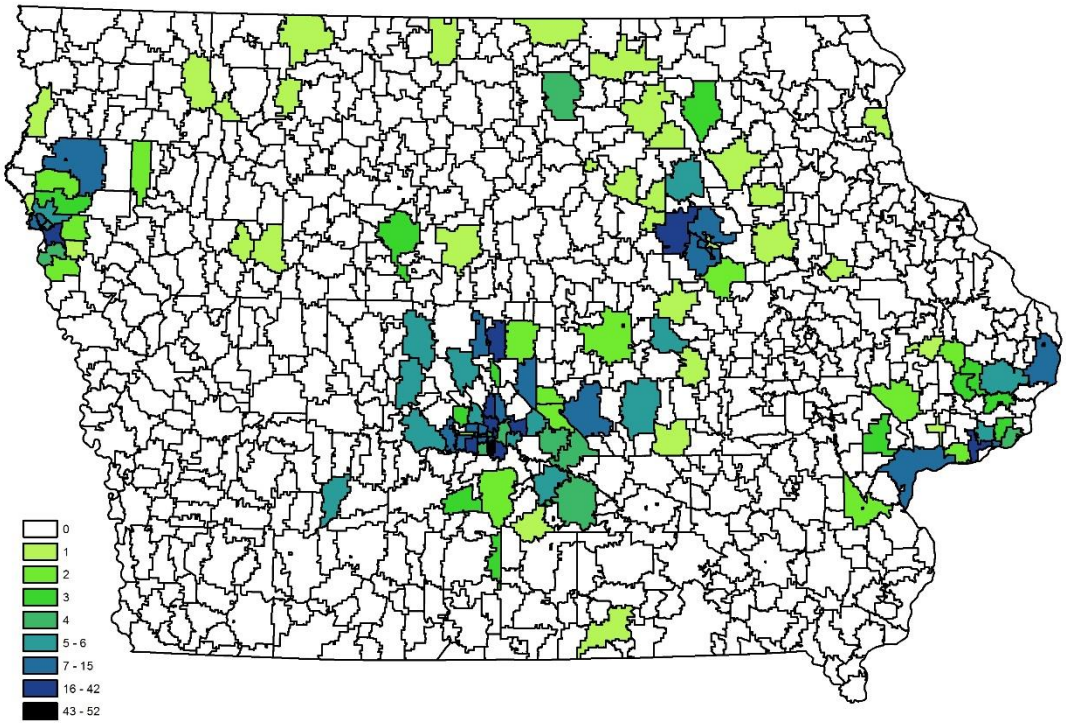

Figure 59. Number of Credit Certificates Issued by Iowa Zip Code.

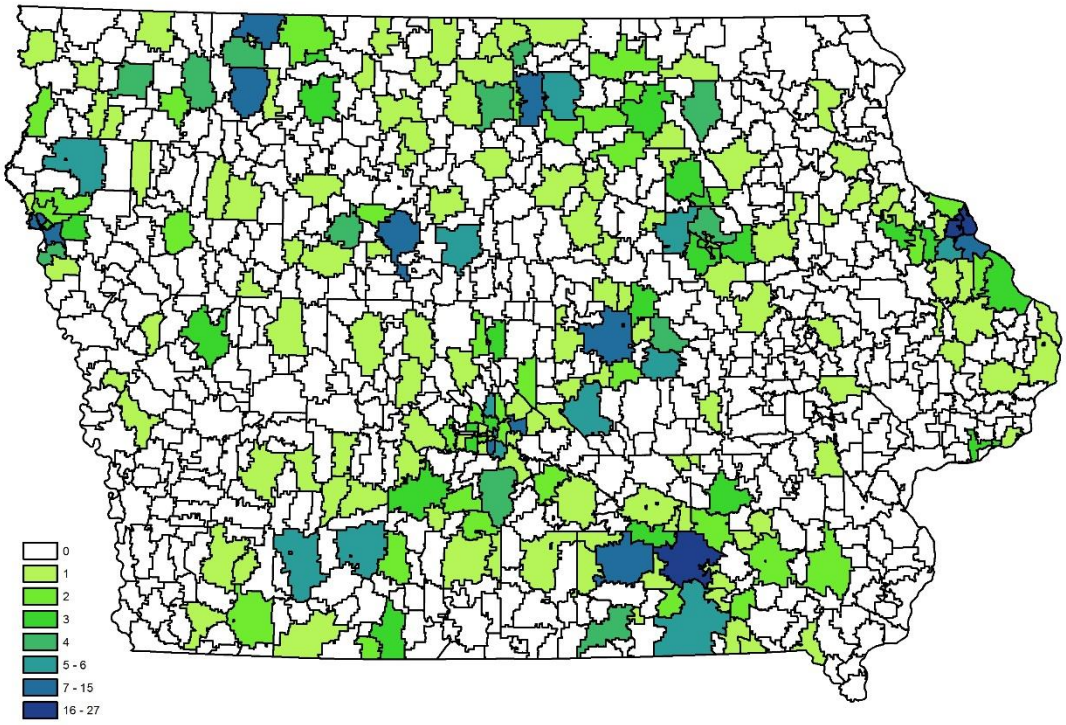

Figure 60. Number of Diplomas Issued by Iowa Zip Code.

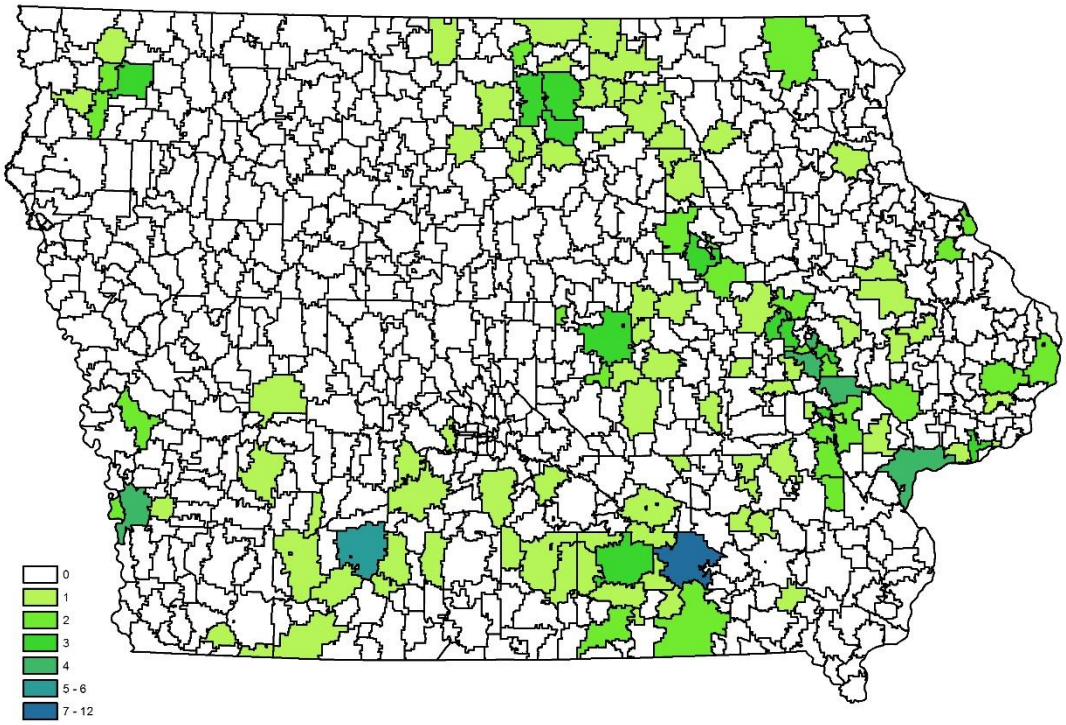

Figure 61. *Number of Associates' Degrees Issued* by Iowa Zip Code.

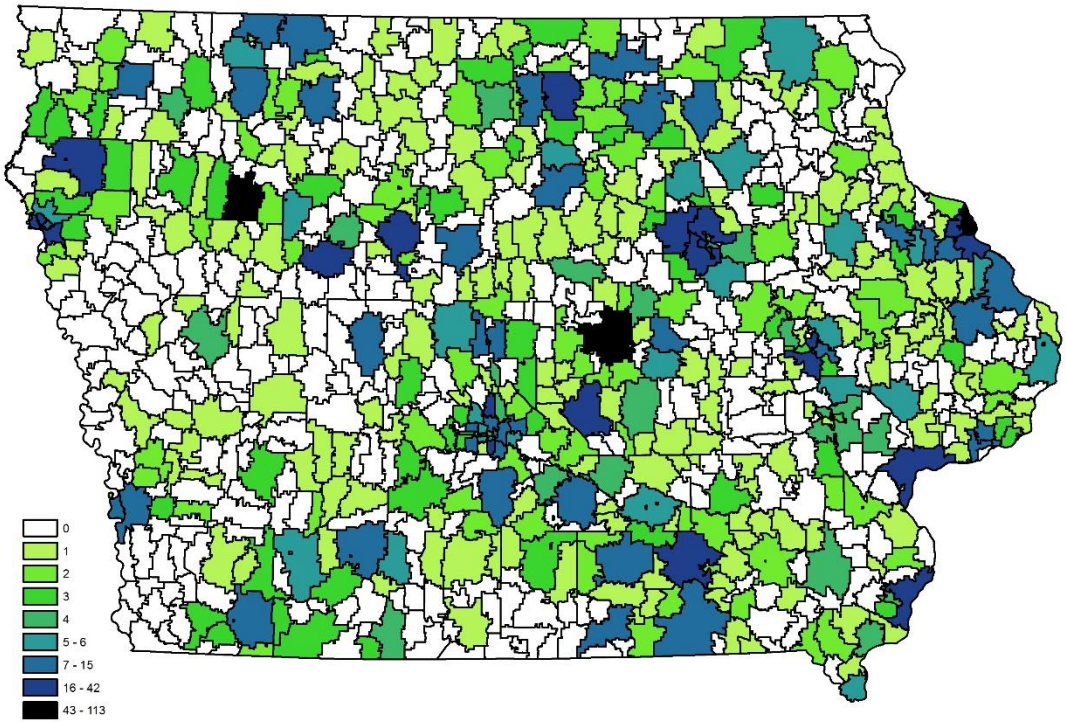

Figure 62. Distribution of I-AM Participants *Earning at Least One College Issued Credential or Third Party Certification* by Iowa Zip Code.

I-AM WELDING PROGRAM

OUTCOMES EVALUATION METHODOLOGY

The focus of the outcomes analysis is on for credit I-AM welding signature programs offered by 13 participating I-AM community colleges that offer for credit welding programs. Only students enrolled in the *for-credit* programs were included in the analysis. Students enrolled only in non-credit programs, including those students enrolled at the two remaining community colleges were omitted from any analysis.

The following section describes the methodology (e.g., research questions, data sources, types of analysis conducted) utilized to conduct the analysis of I-AM student/participant outcomes.

Quasi-Experimental Research Design

To determine the impact of the I-AM welding signature program, examination of participant outcomes utilized a quasi-experimental research design approach which included comparison of two cohorts (a treatment group and a control group). For the purpose of the analysis the treatment group includes students that enrolled in an I-AM welding signature program between Fall 2013 and Spring 2014, and the control group includes students that enrolled in welding programs prior to the implementation of I-AM welding signature programs between Fall 2010 and Spring 2012.

Research Questions. The following research questions provided a framework for the outcomes evaluation analysis:

1. Are there significant differences between students who enrolled in an I-AM funded welding program (treatment group) and students who enrolled in a welding program prior to the start of the I-AM program (control group) in program outcomes in the following areas at Time 2 (i.e., one full quarter of wages following two semesters of enrollment within the period specified for each cohort):

    a. Quarterly increase in wages
    b. Quarterly wage increase in the welding (manufacturing) industry
    c. Job placement
    d. Students' characteristics (e.g., age, race)

2. What is the probability an I-AM welding student will make a certain wage two quarters following the specified time period given specific characteristics (e.g., welding award received)?

Data Sources and Data Sharing. Participant data required for the analysis were obtained from three different sources: (1) the I-AM Participant Database, (2) Iowa Department of Education (IDoE), and (3) Iowa Workforce Development (IWD). In order to protect the confidentiality of participant data (e.g., wage data, social security numbers) a secure online data transfer portal was created and a memorandum of understanding (MOU) was developed and signed between IWD, IDoE, and RISE describing the process required for sharing data between agencies. The MOU indicated that treatment and control group participants for the analysis would be selected by the I-AM Project Lead team based on criteria identified by RISE (see Figure 63 and Table 12). The I-AM Project Lead team forwarded the dataset to the IDoE where data from the National Student Clearinghouse (NSC) was added. The dataset was then forwarded to IWD so that they could add quarterly wage data and de-identify the final dataset that was then shared with RISE (see Figure 63).

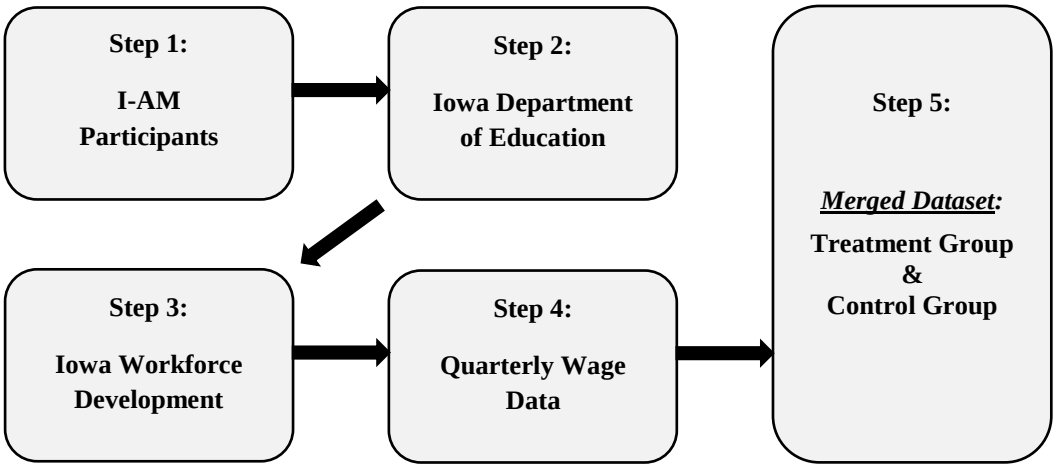

Figure 63. Data Sources for Propensity Score Matching and Data Analysis

Description of Participant Data. Participant data were obtained for three cohorts, one treatment group consisting of students directly impacted by the I-AM program and two control groups that participated in similar programs prior to the start of the I-AM program (see Table 12). Two control groups were included to ensure that the sample size was sufficient for conducting the appropriate analysis (e.g., propensity score matching) needed to determine impact of the I-AM program on students. It should be noted that the time period requested for the treatment group (see Table 12) were chosen due to time constraints in obtaining data from multiple sources. In particular, a lag between obtaining necessary data from the National Student Clearinghouse was anticipated, therefore, the time period from which students were selected for the analysis was earlier than what would have been preferred to examine the impact of the program.

Table 12.
Participant Data Requested from State Agencies (IWD, IDoE)

Students Enrolled in:	Cohort	Semesters Enrolled	Time Period Requested for Wage Data
Welding Programs (I-AM credit)	Treatment Group	Fall 2013— Spring 2014	Q4, FY 2011 (10-01-2011) - Q3, FY 2014 (09-30-2014)
Welding Programs (Non-I-AM credit)	Control Group 1	Fall 2010—Spring 2011	Q4, FY 2008 (10-01-2008) - Q3, FY 2011 (09-30-2011)
Welding Programs (Non-I-AM credit)	Control Group 2	Fall 2011—Spring 2012	Q4, FY 2009 (10-01-2009) - Q3, FY 2012 (09-30-2012)

Note: Q=Quarter; FY=Fiscal Year
Quarterly wage data and industry codes provided by IWD
Demographic data and education records provided by IDoE.

Longitudinal Analysis. Participant data will be analyzed at two time points specified for each of the three cohorts:

- Time 1: One full quarter just prior to participant enrollment during the period specified for each cohort (see Table 12).
- Time 2: One full quarter following two semesters of enrollment within the period specified for each cohort (see Table 12).

Median versus Mean Wage Data Analysis. Whether to use median wages or mean wages in the analysis presented an issue given that both of these measures of central tendency can be affected by the shape of the distribution. Results of tests for the difference in median wages were very similar (e.g., skewness, p-value) to results of tests for the difference (e.g., t-tests) in mean wage, therefore, mean wage data were used in analysis presented in this report. It should be noted that all participants with reported wages (including participants that earned "$0" wages) at Time 1 or Time 2, were included in the tests for the difference in means and tests for the difference in medians analysis. Quarterly wage data is reported for this analysis.

Propensity Score Matching. Propensity score matching (PSM), a statistical analysis described by Rosenbaum & Rubin, 1983, was used to "match" participants in the treatment and control groups based on similar characteristics in order to reduce selection bias that may result from possible confounding variables such as age, sex, race, or wages prior to the specified data collection period. PSM analysis creates probabilities, or propensity scores, to determine which cases from each of the groups have similar propensity scores and therefore can be matched and selected for further analysis. Because PSM reduces bias, the matched set can be used to determine the effectiveness or impact of enrolling in the I-AM welding program (the "treatment").

Descriptive and Inferential Analysis. Descriptive and inferential statistics were conducted on the treatment and control groups. Descriptive statistics includes demographic data (e.g., age, race,

sex, etc) on both the treatment and control groups. Inferential statistics (i.e., t-tests) were conducted on participants' wage data at Time 1 and Time 2 to determine whether there are any significant differences in wages between the treatment and control groups. In particular, both median and mean wage differences were examined to determine differences between the groups.

Bayesian Statistics. Bayes' Theorem (or Bayes' Rule) provides a more reliable way of calculating a conditional probability (e.g., What is the probability of that a "white" participant will earn a specific range of wages at time 2?) given that all possible probabilities for a specified variable (e.g., wages) are taken into account in the analysis. For this study, the Bayesian statistics were conducted to determine the probability of a specific set of wages at Time 2 given that the participant earned a welding award (e.g., certificate or diploma)

OUTCOMES EVALUATION RESULTS

Treatment and Control Group Participants

The Treatment Group. A total of 429 treatment group participants enrolled in welding programs between Fall 2013 and Spring 2014 were included in the dataset provided by the IDoE and IWD. After review of the data, 65 participants were eliminated from the analysis because they were either under 18 years of age, they were not residents of Iowa (therefore no wage data provided) or had no wages reported for the entire time period requested leaving a total of 364 participants. The majority (84.6%) of participants in the treatment group were white, 95.3% were male, 6.9% were disabled, and 71.2% held a job at the time of enrollment and 53.0% indicated that their intent was to get a job in welding. Participants in the treatment group are fairly evenly dispersed across the state of Iowa (see Figure 64; Maps are based on de-identified data I-AM participant database).

The Control Group. The control group consisted of two cohorts of students enrolled in welding programs prior to the start of the I-AM program (see Table 12). A total of 1600 students (979 in control group 1 and 621 in control group 2) were included in the original dataset provided by IDoE and IWD. Of these students, 393 were eliminated from analysis due to one of the following reasons: students were less than 18 years of age or more than 85 years of age; students not residents of Iowa (therefore no wage data provided); no wages were reported for the entire time period requested; students were identified as international students; students were enrolled on one of the two community colleges that did not provide a credit welding program; students did not specify their sex/gender; and students that had wages deemed outliers (i.e., >$150,000) for multiple quarters. The final control group sample size was 1,207 (692 in control group 1 and 515 in control group 2).

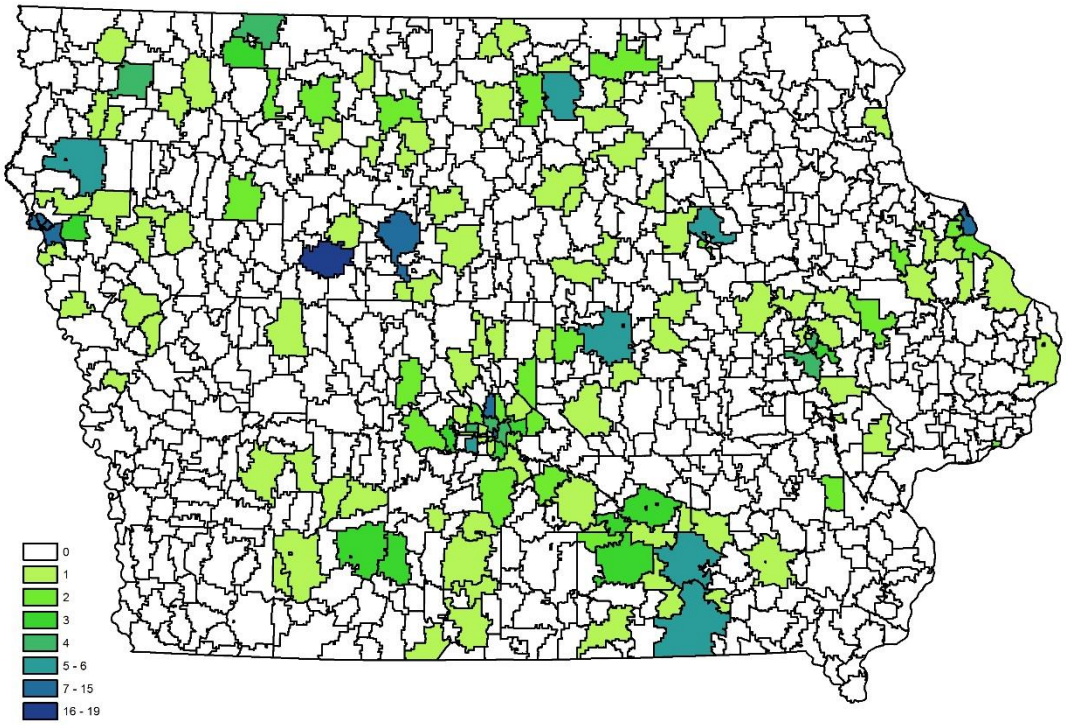

Figure 64. Participants in the Treatment Group by Iowa Zip Code.

Propensity Score Matching

Propensity Score Matching (PSM) was conducted using a nearest neighbor with one-to-one matching approach to match like participants from the control group to the treatment group. The matching was based on similar demographic characteristics (i.e., age; gender; white versus non-white; disabled versus non-disabled; completion of a developmental math course and/or English course; working at the time of enrollment; intent to get a job upon completion; and intent to further career; and wages at Time 1, the quarter prior to enrolling in the program) that could influence results of analysis.

Before Propensity Score Matching. Before matching (with a significance level of 0.05), the treatment and control groups were similar with respect to gender (male/female), disabled, and incumbent worker (participant working at any job at Time 1; see Table 13). However, the treatment and control groups differed in terms of age, race (white/non-white), the need for developmental math, the need for developmental English, the intent to get a job after completion, the intent for further their career after completion, and wages at Time 1. The treatment group has a higher percentage of females, higher percentage of white individuals, individuals that are disabled, and a higher percentage of participants that have earned at least one welding award by the end of Time 2.

Table 13.
Treatment and Control Group Characteristics Prior to PSM.

	Before Matching		
Variables	Treatment Mean (n = 364)	Control Mean (n = 1207)	Differences between Treatment and Control Group p-value
Age	26.32	27.84	0.01
Gender	1.05	1.06	0.46
White	0.85	0.76	0.00
Disabled	0.07	0.05	0.26
Developmental Math	0.12	0.20	0.00
Developmental English	0.05	0.08	0.03
Incumbent Worker	0.71	0.67	0.10
Intent to get a Job	0.53	0.45	0.01
Intent to Further Career	0.12	0.18	0.00
Wages (Time 1)	2169.90	2661.00	0.00

After Propensity Score Matching. After matching (with a significance level of 0.05), the treatment and control groups are now similar with respect to every variable used in the PSM analysis, for example the percentage of treatment group participants and control group participants who are male, white, and disabled are essentially the same (see Table 14).

Table 14.
Treatment and Control Group Characteristics After PSM.

	After Matching		
	Treatment Mean (n = 364)	Control Mean (n = 364)	Differences between Treatment and Control Group p-value
Age	26.32	26.06	0.13
Gender	1.05	1.05	1.00
White	0.85	0.84	0.32
Disabled	0.07	0.06	0.16
Developmental Math	0.12	0.12	0.16
Developmental English	0.05	0.05	1.00
Incumbent Worker	0.71	0.72	0.08
Intent to get a Job	0.05	0.53	0.71
Intent to Further Career	0.12	0.11	0.32
Wages (Time 1)	2169.90	2123.50	0.38

Results of the t-test analysis showed that participants in the treatment group were more likely than the participants in the control group to earn at least one college-issued certificate, earn more certificates, earn a diploma, earn a higher welding award, and earn more welding awards (see Table 15). While no significant differences were found in the number of jobs held at Time 1, participants in the treatment group were more likely to hold a job at Time 2 than the control group (see Table 15).

Table 15.
Differences in Awards Earned, Number of Jobs Held Between Treatment and Control Group Participants.

	Treatment		Control		Differences		
	Mean	SD	Mean	SD	Mean	SD	*t*
At Least One Certificate Awarded	0.09	0.28	0.04	0.19	0.052	0.02	2.94*
Number of Certificates Awarded	0.09	0.28	0.05	0.26	0.041	0.02	2.05*
Diploma Awarded	0.19	0.39	0.01	0.12	0.173	0.02	8.11*
Highest Welding Award Earned	0.46	0.79	0.06	0.29	0.401	0.04	9.11*
Number of Welding Awards Earned	0.27	0.45	0.06	0.31	0.214	0.03	7.45*
Number of Jobs Held at Time 1	0.85	0.70	0.87	0.72	-0.02	0.05	-0.31
Number of Jobs Held at Time 2	1.03	0.74	0.89	0.74	0.14	0.06	2.61*

Note: * p-value < 0.05

Reported mean wages at Time 1 were not significantly different between treatment and control group participants, however, at Time 2, participants in the treatment group earned significantly more than the control group (see Table 16). A similar pattern is found when examining median wage data (see Figure 65). When examining differences in overall wage changes between Time 1 and Time 2 both treatment and control groups, we found that the treatment group experienced a higher increase in wages between Time 1 and Time 2 than did participants in the control group (see Table 16). This difference in overall wages between Time 1 and Time 2 when comparing the medians is not significantly different ($p = 0.120$). In contrast, when examining wages earned within a manufacturing sector, treatment group participants did experience in greater increase in wages than participants in the control group but it was not significant (see Table 16).

Table 16.
Treatment and Control Wages at Time 1 and Time 2.

	Treatment		Control		Differences		
	Mean	SD	Mean	SD	Mean	SD	*t*
Between Groups							
Wages (T1)	2169.92	2557.03	2123.49	2569.16	46.44	189.99	0.24
Wages (T2)	3968.24	3742.91	3284.91	3750.36	683.34	277.72	2.46*
Manufacturing Wages (T1)	573.45	2042.27	711.97	2149.09	-138.52	155.39	-0.89
Manufacturing Wages (T2)	1693.02	3505.53	1407.24	3284.59	285.79	251.79	1.14
Within Groups							
Difference in Wages between T1 and T2	1798.32	3976.13	1161.42	3344.78	636.90	272.34	2.34*
Difference in Manufacturing Wages between T1 and T2	1119.57	3347.07	695.27	3038.32	424.30	236.94	1.79

Note: * p-value < 0.05

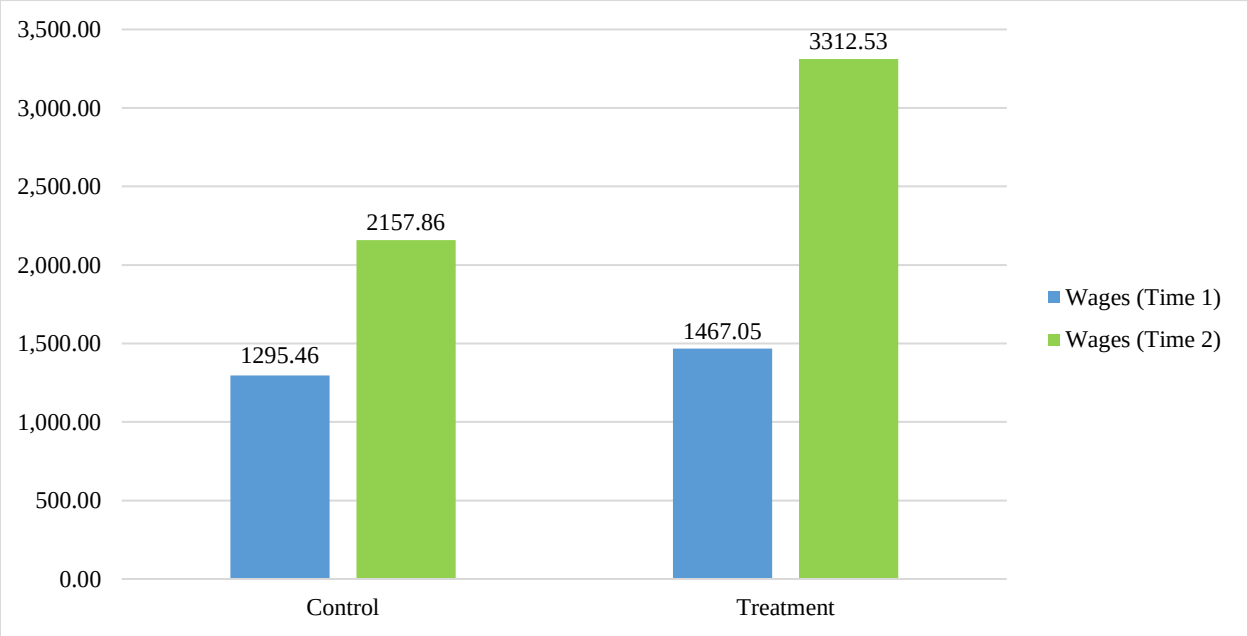

Figure 65. Comparison of median wage data at Time 1 and Time 2 for treatment and control group participants.

Analyses were also conducted to examine whether there were any differences between treatment and control group participants that were non-incumbent workers (i.e., not employed) at the time of enrollment. Non-incumbent workers in the treatment group were more likely to have one or more welding awards, have one or more jobs, and earn more at Time 2 than were non-incumbent workers in the control group (see Table 17). Tests for the difference in median wages between the treatment and control non-incumbent workers also show a similar pattern for wages at Time 2 (p = 0.000) and for the difference in wages between Time 1 and Time 2 (p = 0.004).

Table 17.
Comparison of Non-Incumbent Workers in Treatment and Control Groups

	Treatment		Control		Differences		
	Mean	SD	Mean	SD	Mean	SD	*t*
Number of Welding Awards	0.26	0.44	0.08	0.39	0.18	0.06	3.10*
Number of Jobs (Time 2)	0.90	0.66	0.61	0.66	0.29	0.09	3.12*
Wages (Time 2)	3493.13	3630.82	1524.31	2342.41	1968.82	423.49	4.65*

Note: * p-value < 0.05

Results differ when comparing treatment and control group participants that were incumbent workers (i.e., employed at the time of enrollment). Incumbent workers in the treatment group were significantly more likely to earn one or more welding awards than incumbent workers in the control group (see Table 18). Incumbent workers in the treatment group were more likely to hold one or more jobs, earn more at Time 2, and increase their wages between Time 1 and Time 2, however, these results were not significant (see Table 18).

Table 18.
Comparison of Incumbent Workers in Treatment and Control Groups

	Treatment		Control		Differences		
	Mean	SD	Mean	SD	Mean	SD	*t*
Number of Welding Awards	0.28	0.46	0.05	0.27	0.23	0.03	6.90*
Number of Jobs (Time 2)	1.09	0.76	1.00	0.74	0.09	0.07	1.35
Wages (Time 2)	4160.86	3777.36	3970.33	3969.34	190.52	339.45	0.56
Difference in Wages Between Times 1 and 2	1327.26	3882.46	1171.46	3642.90	155.80	329.92	0.47

Note: * p-value < 0.05

Bayes' Theorem Application Analysis. Bayes' Theorem analysis was conducted on treatment group participants to determine the conditional probability of Time 2 wages given that participants earned a welding certificate or diploma (see Figure 66). Approximately 18% of treatment group participants earned a diploma (see Figure 66, black bar on the right side of figure). Approximately 54% of participants earning a diploma were likely to have more than $5000 in reported quarterly wages at Time 2, 25% were likely to have $1,000-$5,000 in reported quarterly wages at Time 2, 9% were likely to have up to $1,000 in reported wages, and 12% did not have any reported wages at Time 2 (see Figure 66). Approximately 10% of the participants earned a certificate (see Figure 66, black bar in the middle portion of the figure). At Time 2, 56% of participants that earned a certificate were more likely to have more than $5,000 in reported quarterly wages, 21% were more likely to have between $1,000 and $5,000 in reported wages, 7% were more likely to have up to $1000 in reported wages, and 15% were likely not to have any wages reported. Among the participants in the treatment group, 72% had not yet received a certificate or diploma (see Figure 66, black bar in the first section of the figure). At Time 2, 30% of participants that had not earned a certificate or diploma were more likely to have more than $5,000 in reported quarterly wages, 36% were more likely to have between $1,000 and $5,000 in reported wages, 7% were more likely to have up to $1000 in reported wages, and 27% were likely not to have any wages reported. It should be noted that not all of the participants had completed their educational program at the time of the study.

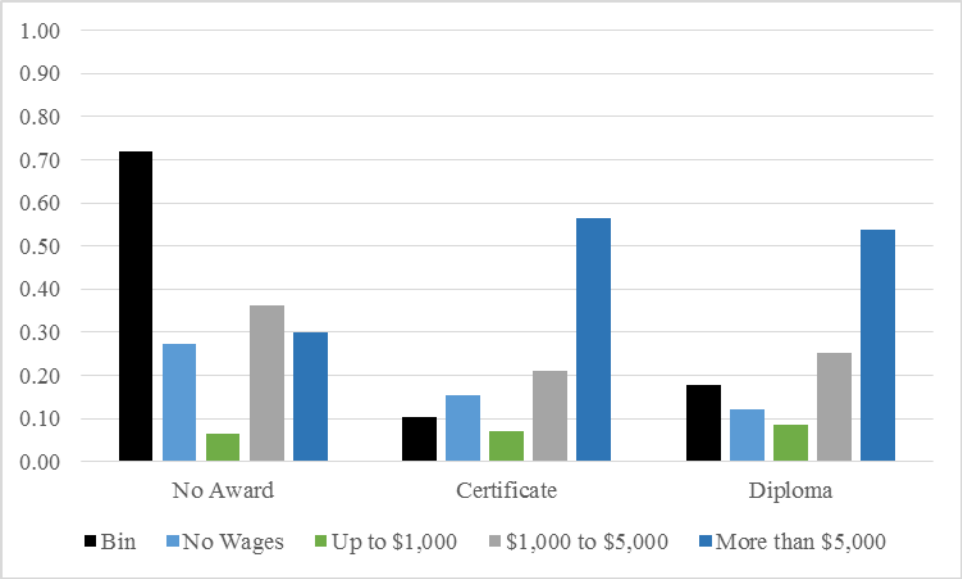

Figure 66. The probability of Time 2 wages given that a participant earned a welding award.

Limitations to the Outcomes Analysis

There are several limitations that should be noted that may have affected data collection, analysis, results and interpretation of results. First, availability of participant data was limited given time constraints in data sharing between organizations (e.g., I-AM Project Lead team, IDoE, and IWD). In particular, the time period selected for Time 1 and Time 2 analysis was chosen given the anticipated turnaround time needed to obtain data from the National Student Clearinghouse in order to be shared by the Iowa Dept. of Education. This resulted in the selection of a treatment cohort group that may not have experienced the full impact of the program (i.e., the welding curriculum was still under revision, in the process of being aligned, and not fully implemented) during this time period. In turn, participants from the control groups may have been negatively impacted by the economic downturn experienced in Iowa during that time period as well.

Not being able to follow students for a longer period of time beyond completion of a certificate or award may have also impacted results. For example, data indicating whether students in either the treatment or control group earned awards or furthered their education any time after Time 2 were not available. It is possible that students may have decided to continue their education and put off seeking either full or part-time employment which in turn would have affected reported quarterly wages. In addition, time needed to secure a job may have affected results as well. Also, students may have needed more time to go through the interview process in order to find the job they wanted or they may have traveled outside of the state to work.

Student data (e.g., demographic, employment) for analysis were limited to those variables available through the I-AM participant database, IDoE, and IWD. The dataset containing participant education and wage data that was shared with RISE for analysis had many cases with missing values. Some missing values may have resulted from not being able to obtain wage data for participants that resided in Iowa or enrolled in the I-AM program but worked in one of the neighboring states (e.g., Nebraska, Illinois, Minnesota). Other data (e.g., highest degree earned, sex, intention to work, etc.) weren’t provided by the participants and therefore could not be shared with RISE.

CONCLUSION

A key to the success of the I-AM Consortium in developing/expanding its seven signature programs was the collaborative efforts between the project leaders at Des Moines Area Community College (lead institution), and each participating community college to develop and implement the goals and objectives of the grant. These collaborative efforts are historically significant because it is the first time that all 15 Iowa community colleges have come together to accomplish an undertaking of this magnitude with the goal of benefitting students, community colleges, Employer Partners, and other key stakeholders in the state. Notably, collaborative efforts between the community colleges were enhanced by the exemplary guidance and facilitation provided by the DMACC Project Team in navigating through the requirements of the grant and in the implementation of the I-AM program. Lead team members were actively involved in the program, in constant contact with each participating community college, and were very knowledgeable about all aspects related to the I-AM program.

Not only did the I-AM program successfully implement all of the goals of the grant with fidelity, it exceeded several expectations of the grant with inclusion of all 15 community colleges in the welding signature program, alignment of advanced manufacturing curricula to third party certifications and industry standards, development of a statewide welding curriculum and establishment of ten Accredited Testing Facilities (rather than the eight ATFs identified in the grant) providing students with instate locations to obtain American Welding Society (AWS) accreditation. The general consensus among college leadership, project leads, and faculty is that the I-AM signature programs at each community college are sustainable for the foreseeable future.

Community colleges were successful in building capacity of their advancing manufacturing programs by hiring and training faculty and Career Coaches/Navigators/Success Coaches, purchasing equipment that met industry standards, providing enhanced student services (e.g., NCRC testing, KeyTrain/Career Ready 101) and with the implementation of the Intrusive Advising Model/Approach created by the I-AM Advising and Enrollment committee.

To facilitate expansion of capacity, committees (e.g., Curriculum, Advising and Enrollment, Marketing, Credit for Prior Learning), comprised of members representing each of the participating community colleges, were set up to work on and address each of milestones and deliverables identified in the grant. Examples of their work included development of an Intrusive Advising Model/Approach; development of a statewide welding curriculum consisting of fourteen courses aligned with American Welding Society's (AWS) School Excelling through National Skill Standard Education (SENSE) Level I; and review and update Credit for Prior Learning policies and practices.

Partnerships with Employers were developed and/or enhanced as a result of the I-AM program. In particular, more Employer Partners contribute to the I-AM program than they did before the start of the project. These partners provide students with opportunities such as internships,

review of resumes, mock interviews, tours of their facilities, and participation at career fairs. They contribute to the development of curriculum by participating on sector and advisory boards and providing guidance and feedback about industry standards and company needs.

Evaluation of the implementation process involved development of surveys and reviewing records to track progress of community colleges in completion of milestones specified in the grant. We experienced some challenges in identifying the correct stakeholders (e.g., employer partners) for specific surveys and had low response rates (e.g., response rates for students were low) for other surveys. Low response rates may have resulted because students in advanced manufacturing may not have had computers readily accessible for responding to surveys or may have occurred due to lack of interest or potential bias on the part of the students.

The total number of participants served, completing a grant-funded program of study, the total number of credentials earned, the number of students pursuing further education after completion of a program of study far exceeded the expected goals. Examination of wage data indicated that the I-AM program had a positive impact on students in the welding program. Significant differences were found between the treatment and control groups from 13 community colleges after they were matched on similar characteristics (e.g., age, race, wages prior to enrollment) to reduce selection bias using Propensity Score Matching. Results of t-test analysis showed that participants in the treatment group were more likely than the participants in the control group to earn at least one college-issued certificate, earn more certificates, earn a diploma, earn a higher welding award, and earn more welding awards.

While no significant differences were found in the number of jobs held at Time 1, participants in the treatment group were more likely to hold a job at Time 2 than the control group. Reported mean wages at Time 1 were not significantly different between treatment and control group participants, however, at Time 2, participants in the treatment group (median wage at Time 2 = $3,312.53) earned significantly more than the control group (median wage at Time 2 = $2,157.86). Results of Bayes' Theorem analysis predicts that treatment group participants that attained a diploma or certificate in an I-AM welding program were 55-56% more likely to have more than $5,000 in reported quarterly wages.

Caution must be taken in the interpretation of wage data results. While the quality of the data provided was good, limitations included missing data (e.g., some participants worked out of state, therefore wage data was not available) and the time period selected for analysis (i.e., time constraints in obtaining data necessitated using data that was collected before full impact of the program could be experienced by students). While wage provided by Iowa Workforce Development have been adjusted for inflation, differences in wages between the groups may have occurred given that the control group occurred while Iowa experienced an economic downturn.

Future studies should consider an experimental design with randomized assignment to treatment and control groups. Extending the time allowed for tracking wage data (e.g., for a specified period following the end of the grant) would also provide a richer set of data and allow for advanced statistical analysis (e.g., multi-year, multi-level comparisons).

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Appendices

Appendix A:

I-AM Status of Milestone Completion: Spring 2016

INTRODUCTION AND METHODOLOGY

The Iowa Advanced Manufacturing (I-AM) Consortium Grant identifies specific priorities, strategies, and milestones each participating community college is required to complete within a specified time frame. To evaluate whether participating community colleges successfully met these milestones, RISE staff regularly reviewed each quarterly report submitted by each community college as well as all of the consortium reports submitted to U.S. Department of Labor (DOL) by the DMACC I-AM lead team.

Procedures. An initial review of quarterly reports (starting with Fiscal Year 1, Quarter 1) by the RISE evaluation team conducted in Fiscal Year 2 revealed that community colleges reported a general overview of activities taking place at their community colleges rather than addressing their progress in completing the specific milestones required. This trend was partly the result of the quarterly reporting format community colleges were asked to use when submitting their reports. Based on these findings and discussion with the DMACC I-AM lead team, significant changes were made to the report format providing community colleges with the ability to report on specific milestones in greater detail. However, the new reporting format led to some discrepancies between what community colleges initially reported and what community colleges reported in the quarterly report following the changes. In order to address these discrepancies, RISE staff conducted interviews with or sent emails to Project Leads and other staff members as needed at each community college. Review and monitoring of quarterly reports continued through Fiscal Year 4, Quarter 2.

Milestone Tables. To track progress made by each community college in completing each milestone specified in the grant, RISE staff created a milestone table for each of the three priorities listed in the grant (i.e., Table 1 lists milestones for Priority 1, Table 2 lists milestones for Priority 2, and Table 3 lists milestones for Priority 3). Progress made in completing milestones was updated on a quarterly basis and data were compiled and reported annually and in aggregate using each of the 14 quarterly reporting cycles for the final report. Data utilized for the milestone tables encompasses activities from Fiscal Year 1, Quarter 1 through Fiscal Year 4, Quarter 2.

Reading Milestone Tables. Milestone tables indicate the overall progress each community college has made in meeting their milestones *by strategy* (shown in grey, see Tables 1-3), by fiscal year, and by community college. The tables also indicate the progress made in completing specific milestones (i.e., P=In Progress or C=Completed) by fiscal year. A black cell reflects milestones not applicable to a specific college, whereas a red cell indicates no data were provided for a specific milestone in that fiscal year.

RESULTS

Summary of Findings for Priorities 1, 2, and 3.

All participating community colleges completed all milestones, strategies, and priorities by the end of Fiscal Year 4, Quarter 2 (March 31, 2016).

- Priority 1: Build stacked and latticed curriculum and career pathways in signature programs. All of the milestones were completed by the end of Fiscal Year 4. All but three of the milestones were completed by the end of Fiscal Year 3.

- Priority 2: Build a steady pipeline of skilled workers for Iowa's advanced manufacturing in-demand occupations. All of the milestones were completed by the end of Fiscal Year 4. All but two of the milestones were completed as the end of Fiscal Year 3.

- Priority 3: Improve the collaboration and alignment between community college programs, the workforce system, and targeted industry employers to keep and create high quality jobs in Iowa. To date, participating community colleges have been actively engaged in activities specified in priority 3. However, priority 3 milestones were ongoing throughout the entire grant and are not expected to be completed until the grant ends on September 30, 2016.

Priority 1: Build Stacked and Latticed Curriculum and Career Pathways in Signature Programs.

Strategy 1.1: Align curricula with relevant industry-recognized certifications.

Milestone 1.1.1: Hire new staff. All (100%) community colleges successfully hired new staff required to implement the project by the end of the first fiscal year. Some turnover of staff occurred throughout the grant requiring some community colleges to hire new staff. However, some community colleges chose not to fill the position created by the vacancies as the grant neared the end. For evaluation purposes, the milestone was considered to be complete if required staff were hired at least once during the grant period.

Milestone 1.1.2: Audit current curricula, identify gaps, & realign with third party credentials (1st program). The majority (80%) of community colleges completed this milestone by the end of Fiscal Year 2 and by the end of Fiscal Year 3 all (100%) had completed this milestone. Although not originally identified as a milestone, AWS SENSE Level I alignment took place at each of the 15 community colleges resulting in a statewide welding curriculum package.

Milestone 1.1.3: Audit current curricula, identify gaps, & realign with third party credentials (Additional program[s]). The majority (79%) of community colleges completed this milestone by the end of Fiscal Year 2 and all (100%) had completed this milestone by the end of Fiscal Year 3. It should be noted that Iowa Lakes Community College had one signature program (welding), therefore, this milestone did not apply.

Milestone 1.1.4: Incorporate NCRC into curricula. The way in which the National Career Readiness Certificate (NCRC) was incorporated or used differs across community colleges. For example, at some community colleges, students are required to take the NCRC as an entrance exam for their respective Advanced Manufacturing program while others use the NCRC as a testing tool to gauge students' soft skills needed for the Advanced Manufacturing programs. Five of the community colleges incorporated the NCRC into their curricula by the end of Fiscal Year 1, 11 community colleges incorporated the NCRC into their curricula by Fiscal Year 2, and the remainder completed this milestone by the end of Fiscal Year 3.

Milestone 1.1.5: Certify instructors per industry standards. Certifying instructors per industry standards was a challenging milestone for many of the community colleges to complete. For example, some community colleges had difficulty completing this milestone because instructors could not pass certification tests. In some instances, there was confusion about which signature programs required certifications or whether certifications were needed at all, while others reported that they lack of the resources to send their respective instructors for certification. By the end of Fiscal Year 2, almost half (47%) of community colleges completed this milestone and all (100%) had completed this milestone by the end of Fiscal Year 3.

Milestone 1.1.6: Renovate space. The grant identified four community colleges expected to renovate their space. However, as the I-AM project was implemented, other community colleges also chose to renovate their spaces, to accommodate an increase in student enrollment. All (100%) of the community colleges completed this milestone by the end of Fiscal Year 2. It should be noted that results presented in the milestone table reflects only the original four community colleges identified in the grant.

Milestone 1.1.7: Train one curriculum profiler per college. While this milestone was initially required for all of the community colleges, exceptions were made because the cost of training and retaining a curriculum profiler was thought to be impractical by some community colleges. Kirkwood Community College had a curriculum profiler on staff prior to the beginning of the I-AM program, and five other community colleges agreed to send a staff member for training. Each of these six community colleges completed this milestone by the end of Fiscal Year 2.

Milestone 1.1.8: Purchase program-related equipment. The majority (73%) of community colleges completed this milestone by the end of Fiscal Year 2 and all (100%) had completed this milestone by the end of Fiscal Year 3. In some cases, the completion of this milestone was not completed until Fiscal Year 3 because equipment purchases took longer than expected to arrive at the community colleges.

Strategy 1.2: Align noncredit offerings with credit courses.

Milestone 1.2.1: Audit credit curricula & identify core competencies (1st program). The majority (79%) of community colleges completed this milestone by the end of Fiscal Year 2 and all had completed this milestone by the end of Fiscal Year 3. It should be noted that Southeastern Community College offers only non-credit opportunities, therefore, this milestone did not apply to them.

Milestone 1.2.2: Audit credit curricula & identify core competencies (Additional program[s]). Fourteen of the community colleges offer additional signature programs, however, two (i.e., Iowa Western Community College, Southeastern Community College) of these do not offer credit for their additional program, and one community college (Iowa Lakes Community College) does not have an additional program. Of the 12 community colleges offering an additional program, 83% had completed this milestone by the end of Fiscal Year 2 and all (100%) of the 12 community colleges had completed this milestone by the end of Fiscal Year 3.

Milestone 1.2.3: Align non-credit offerings to credit core competencies (1st program). The majority (71.4%) of community colleges had completed this milestone by end of Fiscal Year 2, 92.3% had completed this milestone by the end of Fiscal Year 3 and all had completed this milestone by the end of Fiscal Year 4. It should be noted that Southeastern Community College, only offers non-credit signature programs, therefore, this milestone is not applicable.

Milestone 1.2.4: Align non-credit offerings to credit core competencies (Additional program[s]). Twelve of the 15 community colleges offered credit courses in additional signature programs. Among the 12 community colleges, the majority (66.7%) completed this milestone by the end of Fiscal Year 2, 91.7% completed this milestone by the end of Fiscal Year 3, and all had completed by the end of Fiscal Year 4. Of the remaining three community colleges not included in this milestone, two (Iowa Western Community College and Southeastern Community College) offer non-credit courses in their additional signature program, and the third (Iowa Lakes Community College) does not offer an additional signature program.

Milestone 1.2.5: Incorporate non-credit courses into pathways of signature programs (1st program). The majority (86.7%) of community colleges completed this milestone by the end of Fiscal Year 2 and all had completed this milestone by the end of Fiscal Year 3. Community colleges have incorporated non-credit courses into signature program pathways in one of two ways: 1) offering credit and non-credit courses that are completely mirrored allowing students to easily convert non-credit course to credit courses should students decide to change their status at a later date and 2) offering credit and non-credit courses with matched competencies which facilitates conversion/transfer should students decide to change it at a later date.

Milestone 1.2.6: Incorporate non-credit courses into pathways of signature programs (Additional program[s]). The majority (86%) of participating community colleges completed this milestone by the end of Fiscal Year 2 and all had completed this milestone by the end of Fiscal Year 3. Iowa Lakes Community College only has one signature program and, therefore, this milestone is not applicable.

Strategy 1.3: Strengthen Credit for Prior Learning options.

Milestone 1.3.1: Review best practices with CAEL and Iowa Western Community College. The Council for Adult and Experiential Learning (CAEL) interviewed each community college and provided a report detailing each community college's Credit for Prior Learning (CPL) policies. Most of the community colleges have made modifications to their Credit for Prior Learning

policies since the implementation of the I-AM program and will continue to modify their Credit for Prior Learning policies/practices as needed.

Milestone 1.3.2: Develop policies and processes for prior learning assessment. The CAEL report recommended areas of improvement to community colleges' CPL policies and/or practices. Almost all (93.3%) of the community colleges had updated its CPL policies and processes and had them in place by the end of Fiscal Year 2 and all (100%) had done so by the end of Fiscal Year 3. It should be noted that some of the community colleges already had prior learning assessment policies and processes in place prior to implementing the I-AM program.

Milestone 1.3.3: Develop methods for validation of prior learning competencies. The majority (93%) of the community colleges completed this milestone by the end of Fiscal Year 2 and all had completed this milestone by the end of Fiscal Year 4. Examples of validation processes include test out exams, portfolios, and military transcript evaluation.

Milestone 1.3.4: Crosswalk third party certifications to core competencies. The majority (87%) of the community colleges completed this milestone by the end of Fiscal Year 2 and all had completed this milestone by the end of Fiscal Year 3. Community colleges will continue to identify additional third party certifications that meet their core competencies as needed and will continue to crosswalk those third party certifications into Credit for Prior Learning at their community colleges.

Milestone 1.3.5: Develop learning community led by IWCC. The learning community was developed for the purpose of discussing best practices via workshops and monthly conference calls. There was some confusion initially about the community college in charge (DMACC versus IWCC) of the consortium wide Credit for Prior Learning workshops/trainings. Eventually, IWCC took the lead on the Credit for Prior Learning workshops/trainings. This milestone was completed for all the community colleges in Fiscal Year 3.

Strategy 1.4: Establish AWS Accredited Testing Facilities (ATF) throughout the state.

Milestone 1.4.1: Hire certified testing personnel. Only eight of the fifteen community colleges participated in this milestone. The majority (88%) of the community colleges have completed milestone by the end of Fiscal Year 2. All of the community colleges participating in this milestone completed it by the end of Fiscal Year 3. Certified instructors are required in order for the community college to administer the certified welder exam. However, a challenge has been getting instructors certified due to the scheduling of exams and classes and instructors not passing the exams.

Milestone 1.4.2: Equip facilities. Only eight of the fifteen community colleges participated in this milestone. All (100%) of the ATFs at community colleges had been equipped by the end of Fiscal Year 2. The establishment of the AWS ATFs has proved very successful overall among all of the participating community colleges. One community college, not funded by the grant, established an ATF on their campus and another community college added a second ATF for their students.

Milestone 1.4.3: Obtain accreditation from AWS. Only eight of the fifteen community colleges participated in this milestone. Approximately one-third of the community colleges were ATFs by the end of Fiscal Year 2. All eight of the community colleges participating in this milestone were ATFs by the end of Fiscal Year 3.

Priority 2: Build a Steady Pipeline of Skilled Workers for Iowa's Advanced Manufacturing In-demand Occupations.

Strategy 2.1: Develop a plan for remediation and contextualized learning.

Milestone 2.1.1: Analyze current course content and delivery options. The community colleges have realigned their curriculum based on third party certification requirements and local industry needs. All (100%) of the community colleges had completed this milestone by the end of Fiscal Year 2.

Milestone 2.1.2: Implement curricula based on regional needs. Community colleges have discussed regional needs with their local industry partners and have used this information to determine how signature programs can best serve industry needs. In response to requests made by local industry, some community colleges have implemented/developed classes to meet industry partners' specific needs. This milestone was completed by all community colleges by the end of Fiscal Year 2.

Milestone 2.1.3: Incorporate digital literacy into curricula. A digital literacy committee was established to review and make recommendations to the consortium on how best to incorporate digital literacy into the curricula. With the exception of one community college, digital literacy was incorporated at each community college by the end of Fiscal Year 2. The one community college was not able to complete this milestone by end of Fiscal Year 2 due to a fire that broke out at their facility. They were able to complete this milestone by the end of Fiscal Year 3.

Milestone 2.1.4: Secure statewide KeyTrain license. A statewide KeyTrain license was secured in the first Fiscal Year. KeyTrain and its counterpart, Career Ready 101, were incorporated into community college resources to be used by students. Each community college uses KeyTrain in varying degrees dependent upon students' needs and other similar resources currently provided by community colleges. Even though KeyTrain is available to students through the statewide KeyTrain license, some community colleges report that students do not use it even though it is available.

Milestone 2.1.5: Incorporation of the I-BEST model. Only two community colleges, North Iowa Area Community College and Northeast Iowa Community College were specified in the grant to incorporate the I-BEST model into their respective signature programs. However, while not specified in the grant, other community colleges worked to incorporate the I-BEST model into their respective signature programs as well. Both North Iowa Area Community College and Northeast Iowa Community College completed this milestone at the beginning of Fiscal Year 2.

Strategy 2.2: Utilize intensive advising at the community colleges to best match individuals to programs of study and educate them regarding career pathways.

Milestone 2.2.1: Hire and train staff as needed. All staff were hired and/or trained as needed to meet this milestone. All of the community colleges completed this milestone by the end of Fiscal Year 2. Community colleges provided professional development opportunities to faculty and staff as needed and when staffing changes occurred.

Milestone 2.2.2: Develop consortium model to track and advise participants. Development of the model was a major component of the I-AM grant and has been successfully implemented in other academic departments within the community colleges. This milestone was considered complete for all community colleges in the first Fiscal Year because they had started using the Intrusive Advising Model/Approach while it was undergoing revisions. The model was finalized at the end of Fiscal Year 3.

Strategy 2.3: Launch a statewide marketing effort.

Milestone 2.3.1: Hire a marketing coordinator. A consortium marketing coordinator was hired in Fiscal Year 1 to launch, manage and direct the statewide marketing effort. The marketing coordinator will continue to work with the community colleges on their respective regional marketing plans through the end of Fiscal Year 4. It should be noted that because the marketing coordinator was hired to lead statewide marketing efforts for the consortium, this milestone was checked as completed for each community college.

Milestone 2.3.2: Develop a marketing plan with industry and associations using the Dream It Do It model. Elevate Iowa, the statewide marketing campaign, was developed and launched in Fiscal Year 1. This milestone was checked as completed for each community college.

Milestone 2.3.3: Launch a statewide and regional marketing campaign. The statewide marketing campaign was launched at the end of Fiscal Year 1 with the introduction of its Elevate Iowa campaign and each community college launched its own regional marketing campaign by the end of Fiscal Year 2, Quarter 1. Regional marketing campaigns utilized a variety of marketing strategies such as television and radio ads, billboards, and social media (e.g., Facebook, Twitter, YouTube). Several community colleges hosted open houses allowing prospective students to tour the facilities to see what the community college has to offer.

Milestone 2.3.4: Launch a statewide employment and career website focused on advanced manufacturing. The Elevate Iowa website was launched in Fiscal Year 1. This website was developed to provide information about Advanced Manufacturing in Iowa, career choices in the field and links to the community colleges and the programs they offer.

Strategy 2.4: Strengthen articulation from AAS to BAS at University of Iowa.

Milestone 2.4.1: Develop a manufacturing track within the existing BAS. The intent of this milestone was to strengthen the articulation process between the AAS/AS/AA available through the community colleges and the BAS at the University of Iowa. In particular, discussions were

held to determine whether a manufacturing track could be developed within the current BAS program at the University of Iowa. Unfortunately, the University of Iowa was not in agreement, and, therefore, this milestone could not be completed. Based on the reluctance of the University of Iowa to develop the manufacturing track, the DMACC I-AM lead team determined that the milestone could not be met but supported community colleges working on and/or having articulation agreements with other universities/colleges.

Milestone 2.4.2: Develop MOU for Manufacturing Transfer Student Agreement. This milestone was not pursued as a result of the University of Iowa unwillingness to develop a manufacturing track in its BAS program. However, a Memorandum of Understanding (MOU) with the University of Iowa for a general BAS degree was in place prior to the implementation of the I-AM project and was deemed sufficient to meet community colleges' needs.

Milestone 2.4.3: Launch an advising campaign. The intent of this milestone was to ensure that students received advice regarding options (e.g., continuing their education at the community college, transferring to a four-year institution, or getting a job) available following completion of their respective programs. Career Navigators, Career Coaches, and advisors all assisted and advised students regarding various options. Based on data submitted through quarterly reports, approximately 40% of the community colleges had launched an advising campaign by the end of Fiscal Year 2, about 73.3% had launched an advising campaign by the end of Fiscal Year 3 and all of the community colleges had launched an advising campaign by the end of Fiscal Year 4.

Milestone 2.4.4: Enroll students and evaluate progress. By the end of Fiscal Year 2, each of the community colleges had begun enrolling students into at least one of their signature program(s). However, it was not until the end of Fiscal Year 4 that the assessment of the progress made was complete. All community colleges completed this milestone by the end of Fiscal Year 4.

Strategy 2.5: Enhance technology-enabled learning.

Milestone 2.5.1: Develop online and blended delivery options for courses as appropriate. Completing this milestone was challenging for several community colleges because most of the core courses for the signature programs offered require some hands-on training and can be difficult to deliver online. Some community colleges completed this milestone by offering general education courses online to students. The majority (80%) of the community colleges completed this milestone by the end of Fiscal Year 2 and 93.3% of the community colleges completed this milestone by the end of Fiscal Year 3. The last community college to complete this milestone did so in Fiscal Year 4.

Milestone 2.5.2: Incorporate online manufacturing training options as appropriate to supplement hands-on training. A variety of methods were utilized by community colleges to incorporate online training. For example, some community colleges incorporated modules, simulations, KeyTrain/Career Ready 101, and tutoring services online. Almost all (93.3%) of the community colleges had completed this milestone by the end of Fiscal Year 2 and all (100%) had completed this milestone by the end of Fiscal Year 3.

Milestone 2.5.3: Incorporate simulators and state-of-the-art technology into hands-on training. Simulators were incorporated into the curriculum and/or were used at open houses for demonstration purposes (e.g., demonstration of welding). Community colleges that built their own simulators and trainers reported that the simulators have provided wonderful learning opportunities for students in their respective signature programs. Of the 14 community colleges identified by the grant to incorporate simulators, almost all (92.8%) had completed this milestone by the end of Fiscal Year 2 and all had completed this milestone by the end of Fiscal Year 3. One community college did not incorporate simulators in their programs due to the nature of their I-AM non-credit classes.

Priority 3: Improve the collaboration and alignment between community college programs, the workforce system, and targeted industry employers to keep and create high quality jobs in Iowa.

Strategy 3.1: Engage employers and business associations in a systematic way.

Milestone 3.1.1: Analyze worker pipeline supply and demand, share occupational needs/data, and develop occupational profiles. It was expected that community colleges would continue to analyze worker pipeline supply and demand, share occupational needs/data and develop occupational profiles continuously throughout the duration of the grant. Therefore, this particular milestone was considered in progress until the completion of the I-AM grant. Community colleges worked with local employers to determine how they could meet the needs of the local industry. Curriculum profilers at select community colleges helped develop occupational profiles as needed. In turn, the Iowa Advanced Manufacturing sector board used the occupational profile information to ensure community colleges were aligning with the industry needs for skilled advanced manufacturing workers.

Milestone 3.1.2: Create a collaborative, statewide talent development system in high demand occupations and priority programs. Each community college contributed to creating a collaborative, statewide talent development system in various ways by providing information regarding their signature programs and including Employer Partners, IowaWorks, and Iowa Workforce Development on sector and advisory boards. These activities are expected to continue throughout the duration of the grant.

Milestone 3.1.3: Communicate with industry to provide education on the I-AM initiative. Community colleges have continued to work with local industry to provide education about the Iowa Advanced Manufacturing program. These activities are expected to continue throughout the duration of the grant.

Milestone 3.1.4: Include industry representation on grant advisory board, regional workforce partnerships, curriculum development committees, and other planning group. Local industry partners were an integral part of the Advanced Manufacturing program and were involved with community colleges in a variety of ways such as participating on advisory boards, providing feedback on curriculum development and resources to I-AM students, and participating in various career fairs held by community colleges and by local industry. These activities are expected to continue throughout the duration of the grant.

Milestone 3.1.5: Engage employers to promote career pathways and lifelong learning for their employees. Community colleges promoted the I-AM program by continuing to converse with their local Employer Partners and as well as engaging with new Employer Partners. The relationship between community colleges and Employer Partners is reciprocally important. For example, some Employer Partners send their employees to community colleges for extra/specialized training benefitting both the employer and the community college. These activities are expected to continue throughout the duration of the grant.

Strategy 3.2: Engage the Workforce system in a systematic way.

Milestone 3.2.1: Create research-informed, data-driven partnerships among industry, education, and workforce development. Community colleges, local Employer Partners, and Iowa Workforce Development worked together on the Iowa Advanced Manufacturing program. These activities, which included sector and advisory boards, are expected to continue throughout the duration of the grant. These activities are expected to continue throughout the duration of the grant.

Milestone 3.2.2: Create joint marketing and outreach opportunities to reach TAA and other dislocated workers. Community colleges continued to engage the community through a variety of marketing campaigns (e.g., career fairs, industry tours, presentations) geared to reach various groups (e.g., TAA and dislocated workers) targeted by the program. These activities are expected to continue throughout the duration of the grant.

Milestone 3.2.3: Partner on offering job fairs and mission-based special events. Community colleges partnered with local industry to host job fairs and host a National Manufacturing Day event (generally held in October; centered on the advancements in manufacturing). These types of activities are expected to continue throughout the duration of the grant.

Milestone 3.2.4: Collaborate on participant referral process for the I-AM initiative. Local industry partners, the Iowa Workforce Development, and other community partners work with community colleges by referring prospective students to community college programs and/or for extra/specialized training. In some cases, community colleges have worked with Employer Partners by offering courses specifically developed for employees of their Industry/Employer Partners. These activities are expected to continue throughout the duration of the grant.

Table 1. Milestone Progress by College. Priority 1: Build stacked and latticed curriculum and career pathways in signature programs.

	DMACC				EICC				HCC				ICCC			
	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4
Align curricula with relevant certifications	*P*	*C*	*C*	*C*	*P*	*P*	*C*	*C*	*P*	*P*	*C*	*C*	*P*	*P*	*C*	*C*
1.1.1: Hire new staff	P	C	C	C	P	C	C	C	P	C	C	C	P	C	C	C
1.1.2: Audit current curricula: 1st program	P	C	C	C	P	C	C	C	P	P	C	C	C	C	C	C
1.1.3: Audit current curricula: Additional program(s)	P	C	C	C		C	C	C		P	C	C	C	C	C	C
1.1.4: Incorporate NCRC into curricula		C	C	C	P	C	C	C	P	P	C	C	C	C	C	C
1.1.5: Certify instructors per industry standards	P	C	C	C	P	P	C	C		P	C	C	P	P	C	C
1.1.6: Renovate space		C	C	C												
1.1.7: Train one curriculum profiler per college (optional)	P	C	C	C						C	C	C		C	C	C
1.1.8: Purchase program-related equipment	P	C	C	C	P	P	C	C	P	C	C	C	C	C	C	C
Align noncredit offerings with credit courses	*P*	*C*	*C*	*C*	*P*	*C*	*C*	*C*	*P*	*P*	*C*	*C*	*C*	*C*	*C*	*C*
1.2.1: Audit curricula & identify competencies: 1st prog.	P	C	C	C	P	C	C	C	P	P	C	C	C	C	C	C
1.2.2: Audit curricula & identify competencies: Add. prog.	P	C	C	C		C	C	C		P	C	C	C	C	C	C
1.2.3: Audit non-credit to credit competencies: 1st prog.	C	C	C	C	C	C	C	C	P	P	C	C	C	C	C	C
1.2.4: Audit non-credit to credit competencies: Add. prog.	C	C	C	C	C	C	C	C		P	C	C	C	C	C	C
1.2.5: Incorporate non-credit into PoS programs: 1st prog.	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
1.2.6: Incorporate non-credit into PoS programs: Add. prog.	C	C	C	C	C	C	C	C		P	C	C	C	C	C	C
Strengthen credit for prior learning options	*P*	*P*	*C*	*C*	*P*	*P*	*C*	*C*	*P*	*P*	*C*	*C*	*P*	*P*	*C*	*C*
1.3.1: Review best practices with CAEL and IWCC	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
1.3.2: Develop policies for prior learning assessment	P	C	C	C	P	C	C	C	P	C	C	C	P	C	C	C
1.3.3: Develop methods for validation of prior learning	P	C	C	C	P	C	C	C	P	C	C	C	P	C	C	C
1.3.4: Crosswalk 3rd party certification to competencies		C	C	C	P	C	C	C		P	C	C		C	C	C
1.3.5: Develop learning community led by IWCC	P	P	C	C	P	P	C	C	P	P	C	C	P	P	C	C
Establish AWS accredited testing facilities	*P*	*P*	*C*	*C*	*P*	*P*	*C*	*C*					*P*	*P*	*C*	*C*
1.4.1: Hire certified testing personnel	P	C	C	C	P	P	C	C					P	C	C	C
1.4.2: Equip facilities	P	C	C	C	P	C	C	C					P	C	C	C
1.4.3: Obtain accreditation from AWS	P	P	C	C	P	P	C	C					P	P	C	C

Key: C = Completed, P = In Progress, ■ = Not Applicable, ■ = No Data/No Report, ▨ = Before Start Date, * = Not necessary
Y1 = Fiscal Year 1; Y2 = Fiscal Year 2; Y3 = Fiscal Year 3; Y4 = Fiscal Year 4

Table 1 (continued). Milestone Progress by College. Priority 1: Build stacked and latticed curriculum and career pathways in signature programs.

	IHCC				ILCC				IVCC				IWCC			
	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4
Align curricula with relevant certifications	*P*	*C*	*C*	*C*	*P*	*C*	*C*	*C*	*P*	*P*	*C*	*C*	*P*	*P*	*C*	*C*
1.1.1: Hire new staff	C	C	C	C	P	C	C	C	P	C	C	C	P	C	C	C
1.1.2: Audit current curricula: 1st program	C	C	C	C	P	C	C	C	C	P	C	C	P	P	C	C
1.1.3: Audit current curricula: Additional program(s)	C	C	C	C					P	P	C	C	P	P	C	C
1.1.4: Incorporate NCRC into curricula	C	C	C	C	P	C	C	C	P	C	C	C	P	C	C	C
1.1.5: Certify instructors per industry standards	P	C	C	C	P	C	C	C	P	C	C	C	P	P	C	C
1.1.6: Renovate space					P	C	C	C								
1.1.7: Train one curriculum profiler per college (optional)														C	C	C
1.1.8: Purchase program-related equipment	P	C	C	C	P	C	C	C	P	P	C	C	P	C	C	C
Align noncredit offerings with credit courses	*C*	*C*	*C*	*C*	*P*	*C*	*C*	*C*	*P*	*P*	*C*	*C*	*P*	*P*	*C*	*C*
1.2.1: Audit curricula & identify competencies: 1st prog.	C	C	C	C	P	C	C	C	C	P	C	C	P	P	C	C
1.2.2: Audit curricula & identify competencies: Add. prog.	C	C	C	C					P	P	C	C				
1.2.3: Audit non-credit to credit competencies: 1st prog.	C	C	C	C		C	C	C	C	C	C	C	C	P	C	C
1.2.4: Audit non-credit to credit competencies: Add. prog.	C	C	C	C					C	C	C	C				
1.2.5: Incorporate non-credit into PoS programs: 1st prog.	C	C	C	C		C	C	C	C	C	C	C	C	P	C	C
1.2.6: Incorporate non-credit into PoS programs: Add. prog.	C	C	C	C					C	C	C	C	P	P	C	C
Strengthen credit for prior learning options	*P*	*P*	*C*	*C*	*P*	*P*	*P*	*C*	*P*	*P*	*C*	*C*	*P*	*P*	*C*	*C*
1.3.1: Review best practices with CAEL and IWCC	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
1.3.2: Develop policies for prior learning assessment	P	C	C	C	P	P	C	C	P	C	C	C	C	C	C	C
1.3.3: Develop methods for validation of prior learning	P	C	C	C	P	P	P	C	P	C	C	C	C	C	C	C
1.3.4: Crosswalk 3rd party certification to competencies		C	C	C	C	C	C	C		C	C	C	C	C	C	C
1.3.5: Develop learning community led by IWCC	P	P	C	C	P	P	C	C	P	P	C	C	P	P	C	C
Establish AWS accredited testing facilities	*P*	*C*	*C*	*C*	*P*	*P*	*C*	*C*	*P*	*C*	*C*	*C*				
1.4.1: Hire certified testing personnel	P	C	C	C	P	C	C	C	P	C	C	C				
1.4.2: Equip facilities	P	C	C	C	P	C	C	C	P	C	C	C				
1.4.3: Obtain accreditation from AWS	P	C	C	C	P	P	C	C	P	C	C	C				

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Y1 = Fiscal Year 1; Y2 = Fiscal Year 2; Y3 = Fiscal Year 3; Y4 = Fiscal Year 4

Table 1 (continued). Milestone Progress by College. Priority 1: Build stacked and latticed curriculum and career pathways in signature programs.

	KCC				NCC				NIACC				NICC			
	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4
Align curricula with relevant certifications	*P*	*C*	*C*	*C*	*P*	*P*	*C*	*C*	*P*	*P*	*C*	*C*	*P*	*P*	*C*	*C*
1.1.1: Hire new staff	P	C	C	C	C	C	C	C	P	C	C	C	C	C	C	C
1.1.2: Audit current curricula: 1st program	C	C	C	C	C	C	C	C	P	C	C	C	C	C	C	C
1.1.3: Audit current curricula: Additional program(s)	P	C	C	C	P	C	C	C	P	C	C	C	C	C	C	C
1.1.4: Incorporate NCRC into curricula	P	C	C	C	P	C	C	C	C	C	C	C	C	C	C	C
1.1.5: Certify instructors per industry standards	P	C	C	C		P	C	C		P	C	C	P	C	C	C
1.1.6: Renovate space						C	C	C								
1.1.7: Train one curriculum profiler per college (optional)	C	C	C	C										C	C	C
1.1.8: Purchase program-related equipment	P	C	C	C	P	C	C	C	C	C	C	C	P	P	C	C
Align noncredit offerings with credit courses	*P*	*C*	*C*	*C*	*P*	*P*	*P*	*C*	*P*	*P*	*C*	*C*	*P*	*C*	*C*	*C*
1.2.1: Audit curricula & identify competencies: 1st prog.	C	C	C	C	C	C	C	C	P	C	C	C	C	C	C	C
1.2.2: Audit curricula & identify competencies: Add. prog.	C	C	C	C	C	C	C	C	P	C	C	C	C	C	C	C
1.2.3: Audit non-credit to credit competencies: 1st prog.	P	C	C	C	P	P	P	C	C	P	C	C	P	C	C	C
1.2.4: Audit non-credit to credit competencies: Add. prog.		C	C	C	P	P	P	C	P	P	C	C		C	C	C
1.2.5: Incorporate non-credit into PoS programs: 1st prog.	P	C	C	C	P	C	C	C	C	C	C	C	P	C	C	C
1.2.6: Incorporate non-credit into PoS programs: Add. prog.		C	C	C	P	C	C	C	P	C	C	C		C	C	C
Strengthen credit for prior learning options	*P*	*P*	*C*	*C*	*P*	*P*	*C*	*C*	*P*	*P*	*C*	*C*	*P*	*P*	*C*	*C*
1.3.1: Review best practices with CAEL and IWCC	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
1.3.2: Develop policies for prior learning assessment	P	C	C	C	P	C	C	C	P	C	C	C	P	C	C	C
1.3.3: Develop methods for validation of prior learning	P	C	C	C	P	C	C	C	P	C	C	C	P	C	C	C
1.3.4: Crosswalk 3rd party certification to competencies		C	C	C		C	C	C		P	C	C		C	C	C
1.3.5: Develop learning community led by IWCC	P	P	C	C	P	P	C	C	P	P	C	C	P	P	C	C
Establish AWS accredited testing facilities	*P*	*C*	*C*	*C*												
1.4.1: Hire certified testing personnel	P	C	C	C												
1.4.2: Equip facilities	C	C	C	C												
1.4.3: Obtain accreditation from AWS	P	C	C	C												

Key: C = Completed, P = In Progress, ■ = Not Applicable, ■ = No Data/No Report, ▨ = Before Start Date, * = Not necessary
Y1 = Fiscal Year 1; Y2 = Fiscal Year 2; Y3 = Fiscal Year 3; Y4 = Fiscal Year 4

Table 1 (continued). Milestone Progress by College. Priority 1: Build stacked and latticed curriculum and career pathways in signature programs.

	SCC				SWCC				WITCC			
	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4
Align curricula with relevant certifications	*P*	*P*	*C*	*C*	*P*	*C*	*C*	*C*	*P*	*P*	*C*	*C*
1.1.1: Hire new staff	P	C	C	C	P	C	C	C	C	C	C	C
1.1.2: Audit current curricula: 1st program	P	C	C	C	P	C	C	C	C	C	C	C
1.1.3: Audit current curricula: Additional program(s)		C	C	C	P	C	C	C	P	C	C	C
1.1.4: Incorporate NCRC into curricula	C	C	C	C	P	C	C	C	P	C	C	C
1.1.5: Certify instructors per industry standards	P	P	C	C		C	C	C	P	P	C	C
1.1.6: Renovate space						C	C	C				
1.1.7: Train one curriculum profiler per college (optional)												
1.1.8: Purchase program-related equipment	C	C	C	C	P	C	C	C	C	P	C	C
Align noncredit offerings with credit courses	*P*	*C*	*C*	*C*	*P*	*P*	*C*	*C*	*P*	*C*	*C*	*C*
1.2.1: Audit curricula & identify competencies: 1st prog.					P	C	C	C	C	C	C	C
1.2.2: Audit curricula & identify competencies: Add. prog.					P	C	C	C	P	C	C	C
1.2.3: Audit non-credit to credit competencies: 1st prog.						P	C	C	P	C	C	C
1.2.4: Audit non-credit to credit competencies: Add. prog.						P	C	C	P	C	C	C
1.2.5: Incorporate non-credit into PoS programs: 1st prog.	C	C	C	C		C	C	C	P	C	C	C
1.2.6: Incorporate non-credit into PoS programs: Add. prog.	C	C	C	C		C	C	C	P	C	C	C
Strengthen credit for prior learning options	*P*	*P*	*C*	*C*	*P*	*P*	*C*	*C*	*P*	*P*	*C*	*C*
1.3.1: Review best practices with CAEL and IWCC	C	C	C	C	C	C	C	C	C	C	C	C
1.3.2: Develop policies for prior learning assessment	P	C	C	C	P	C	C	C	P	C	C	C
1.3.3: Develop methods for validation of prior learning	P	C	C	C	P	C	C	C	P	C	C	C
1.3.4: Crosswalk 3rd party certification to competencies		C	C	C		C	C	C	P	C	C	C
1.3.5: Develop learning community led by IWCC	P	P	C	C	P	P	C	C	P	P	C	C
Establish AWS accredited testing facilities									*P*	*P*	*C*	*C*
1.4.1: Hire certified testing personnel									P	C	C	C
1.4.2: Equip facilities									C	C	C	C
1.4.3: Obtain accreditation from AWS									P	P	C	C

Key: C = Completed, P = In Progress, ■ = Not Applicable, = No Data/No Report, = Before Start Date, * = Not necessary
Y1 = Fiscal Year 1; Y2 = Fiscal Year 2; Y3 = Fiscal Year 3; Y4 = Fiscal Year 4

Table 2. Milestone Progress by College. Priority 2: Build a steady pipeline of skilled workers for Iowa's advanced manufacturing in-demand occupations.

	DMACC				EICC				HCC				ICCC			
	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4
Develop a plan for remediation and contextualized learning	*P*	*C*	*C*	*C*	*P*	*C*	*C*	*C*	*P*	*C*	*C*	*C*	*P*	*C*	*C*	*C*
2.1.1: Analyze current course content and delivery options	P	C	C	C	P	C	C	C	P	C	C	C	P	C	C	C
2.1.2: Implement curricula based on regional needs	P	C	C	C	P	C	C	C	P	C	C	C	P	C	C	C
2.1.3: Incorporate digital literacy into curricula	P	C	C	C	P	C	C	C		C	C	C		C	C	C
2.1.4: Secure statewide KeyTrain license	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2.1.5: Incorporation of the I-BEST model																
Utilize intensive advising at the community college to best match individuals to programs of study and educate them regarding career pathways	*P*	*C*	*C*	*C*	*P*	*C*	*C*	*C*	*P*	*C*	*C*	*C*	*P*	*C*	*C*	*C*
2.2.1: Hire and train staff as needed	P	C	C	C	P	C	C	C	P	C	C	C	P	C	C	C
2.2.2: Develop model to track/advise participants	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Launch a statewide marketing effort	*P*	C	C	C	P	C	C	C	P	C	C	C	P	C	C	*C*
2.3.1: Hire a marketing coordinator	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2.3.2: Develop a plan using the Dream It Do It model	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2.3.3: Launch a statewide and regional marketing campaign	P	C	C	C	P	C	C	C	P	C	C	C	P	C	C	C
2.3.4: Launch a website focused on Adv. Manufacturing	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Articulation from AAS to BAS	*P*	*P*	*P*	*C*	*P*	*P*	*P*	*C*	*P*	*P*	*P*	*C*	*P*	*P*	*P*	*C*
2.4.1: Develop a manufacturing track within existing BAS	P	C*	C*	C*	P	C*	C*	C*	P	C*	C*	C*	P	C*	C*	C*
2.4.2: Develop MoU for Manufacturing Transfer Students	P	C*	C*	C*		C*	C*	C*	P	C*	C*	C*		C*	C*	C*
2.4.3: Launch an advising campaign	P	P	P	C	P	C	C	C	P	P	C	C	P	P	C	C
2.4.4: Enroll students and evaluate progress		P	P	C		P	P	C		P	P	C	P	P	P	C
Enhance technology-enabled learning	*P*	*C*	*C*	*C*	*P*	*C*	*C*	*C*	*P*	*C*	*C*	*C*	*P*	*P*	*C*	*C*
2.5.1: Develop online and blended delivery options	P	C	C	C	P	C	C	C	P	C	C	C	P	P	C	C
2.5.2: Incorporate online training to supplement hands-on		C	C	C	P	C	C	C		C	C	C		C	C	C
2.5.3: Incorporate simulators and tech. into training		C	C	C	P	C	C	C		C	C	C	P	C	C	C

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Y1 = Fiscal Year 1; Y2 = Fiscal Year 2; Y3 = Fiscal Year 3; Y4 = Fiscal Year 4

Table 2 (continued). Milestone Progress by College. Priority 2: Build a steady pipeline of skilled workers for Iowa's advanced manufacturing in-demand occupations.

	IHCC				ILCC				IVCC				IWCC			
	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4
Develop a plan for remediation and contextualized learning	*P*	*C*	*C*	*C*	*P*	*C*	*C*	*C*	*P*	*C*	*C*	*C*	*P*	*C*	*C*	*C*
2.1.1: Analyze current course content and delivery options	P	C	C	C	P	C	C	C	C	C	C	C	P	C	C	C
2.1.2: Implement curricula based on regional needs	P	C	C	C	P	C	C	C	C	C	C	C	P	C	C	C
2.1.3: Incorporate digital literacy into curricula	P	C	C	C		C	C	C		C	C	C		C	C	C
2.1.4: Secure statewide KeyTrain license	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2.1.5: Incorporation of the I-BEST model																
Utilize intensive advising at the community college to best match individuals to programs of study and educate them regarding career pathways	*P*	*C*	*C*	*C*	*P*	*C*	*C*	*C*	*P*	*C*	*C*	*C*	*P*	*C*	*C*	*C*
2.2.1: Hire and train staff as needed	P	C	C	C	P	C	C	C	P	C	C	C	P	C	C	C
2.2.2: Develop model to track/advise participants	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Launch a statewide marketing effort	*P*	C	C	C	C	C	C	C	P	C	C	C	P	C	C	*C*
2.3.1: Hire a marketing coordinator	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2.3.2: Develop a plan using the Dream It Do It model	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2.3.3: Launch a statewide and regional marketing campaign	P	C	C	C	C	C	C	C	P	C	C	C	P	C	C	C
2.3.4: Launch a website focused on Adv. Manufacturing	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Articulation from AAS to BAS	*P*	*P*	*P*	*C*	*P*	*P*	*P*	*C*	*P*	*P*	*P*	*C*	*P*	*P*	*P*	*C*
2.4.1: Develop a manufacturing track within existing BAS	P	C*	C*	C*	P	C*	C*	C*	P	C*	C*	C*	P	C*	C*	C*
2.4.2: Develop MoU for Manufacturing Transfer Students		C*	C*	C*		C*	C*	C*		C*	C*	C*		C*	C*	C*
2.4.3: Launch an advising campaign	P	C	C	C	P	P	C	C	P	P	C	C	P	C	C	C
2.4.4: Enroll students and evaluate progress	P	P	P	C		P	P	C		P	P	C	P	P	P	C
Enhance technology-enabled learning	*P*	*C*	*C*	*C*	*P*	*C*	*C*	*C*	*P*	*P*	*C*	*C*	*P*	*C*	*C*	*C*
2.5.1: Develop online and blended delivery options	P	C	C	C	P	C	C	C	P	P	C	C	P	C	C	C
2.5.2: Incorporate online training to supplement hands-on	P	C	C	C	P	C	C	C	P	C	C	C		C	C	C
2.5.3: Incorporate simulators and tech. into training	C	C	C	C	P	C	C	C	P	C	C	C		C	C	C

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Y1 = Fiscal Year 1; Y2 = Fiscal Year 2; Y3 = Fiscal Year 3; Y4 = Fiscal Year 4

Table 2 (continued). Milestone Progress by College. Priority 2: Build a steady pipeline of skilled workers for Iowa's advanced manufacturing in-demand occupations.

	KCC				NCC				NIACC				NICC			
	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4
Develop a plan for remediation and contextualized learning	*P*	*C*	*C*	*C*	*P*	*C*	*C*	*C*	*P*	*C*	*C*	*C*	*P*	*C*	*C*	*C*
2.1.1: Analyze current course content and delivery options	C	C	C	C	C	C	C	C	P	C	C	C	C	C	C	C
2.1.2: Implement curricula based on regional needs	C	C	C	C	C	C	C	C	P	C	C	C	C	C	C	C
2.1.3: Incorporate digital literacy into curricula		C	C	C		C	C	C		C	C	C	P	C	C	C
2.1.4: Secure statewide KeyTrain license	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2.1.5: Incorporation of the I-BEST model									P	C	C	C	P	C	C	C
Utilize intensive advising at the community college to best match individuals to programs of study and educate them regarding career pathways	*P*	*C*	*C*	*C*	*P*	*C*	*C*	*C*	*P*	*C*	*C*	*C*	*P*	*C*	*C*	*C*
2.2.1: Hire and train staff as needed	P	C	C	C	P	C	C	C	P	C	C	C	P	C	C	C
2.2.2: Develop model to track/advise participants	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Launch a statewide marketing effort	*P*	C	C	C	P	C	C	C	C	C	C	C	P	C	C	*C*
2.3.1: Hire a marketing coordinator	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2.3.2: Develop a plan using the Dream It Do It model	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2.3.3: Launch a statewide and regional marketing campaign	P	C	C	C	P	C	C	C	C	C	C	C	P	C	C	C
2.3.4: Launch a website focused on Adv. Manufacturing	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Articulation from AAS to BAS	*P*	*P*	*P*	*C*	*P*	*P*	*P*	*C*	*P*	*P*	*P*	*C*	*P*	*P*	*P*	*C*
2.4.1: Develop a manufacturing track within existing BAS	P	C*	C*	C*	P	C*	C*	C*	P	C*	C*	C*	P	C*	C*	C*
2.4.2: Develop MoU for Manufacturing Transfer Students	P	C*	C*	C*		C*	C*	C*	P	C*	C*	C*		C*	C*	C*
2.4.3: Launch an advising campaign	P	P	P	C	P	P	P	C	P	P	P	C	P	C	C	C
2.4.4: Enroll students and evaluate progress	P	P	P	C		P	P	C		P	P	C	P	P	P	C
Enhance technology-enabled learning	*P*	*C*	*C*	*C*	*P*	*C*	*C*	*C*	*P*	*C*	*C*	*C*	*P*	*C*	*C*	*C*
2.5.1: Develop online and blended delivery options	P	C	C	C	P	C	C	C	P	C	C	C	P	C	C	C
2.5.2: Incorporate online training to supplement hands-on	P	C	C	C	P	C	C	C		C	C	C		C	C	C
2.5.3: Incorporate simulators and tech. into training	P	C	C	C	P	C	C	C		C	C	C		C	C	C

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Y1 = Fiscal Year 1; Y2 = Fiscal Year 2; Y3 = Fiscal Year 3; Y4 = Fiscal Year 4

Table 2 (continued). Milestone Progress by College. Priority 2: Build a steady pipeline of skilled workers for Iowa's advanced manufacturing in-demand occupations.

	SCC				SWCC				WITCC			
	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4
Develop a plan for remediation and contextualized learning	*P*	*C*	*C*	*C*	*P*	*C*	*C*	*C*	*P*	*P*	*C*	*C*
2.1.1: Analyze current course content and delivery options	P	C	C	C	P	C	C	C	C	C	C	C
2.1.2: Implement curricula based on regional needs	P	C	C	C	P	C	C	C	C	C	C	C
2.1.3: Incorporate digital literacy into curricula		C	C	C		C	C	C	P	P	C	C
2.1.4: Secure statewide KeyTrain license	C	C	C	C	C	C	C	C	C	C	C	C
2.1.5: Incorporation of the I-BEST model												
Utilize intensive advising at the community college to best match individuals to programs of study and educate them regarding career pathways	*P*	*C*	*C*	*C*	*P*	*C*	*C*	*C*	*C*	*C*	*C*	*C*
2.2.1: Hire and train staff as needed	P	C	C	C	P	C	C	C	C	C	C	C
2.2.2: Develop model to track/advise participants	C	C	C	C	C	C	C	C	C	C	C	C
Launch a statewide marketing effort	*P*	C	C	C	P	C	C	C	C	C	C	C
2.3.1: Hire a marketing coordinator	C	C	C	C	C	C	C	C	C	C	C	C
2.3.2: Develop a plan using the Dream It Do It model	C	C	C	C	C	C	C	C	C	C	C	C
2.3.3: Launch a statewide and regional marketing campaign	P	C	C	C	P	C	C	C	C	C	C	C
2.3.4: Launch a website focused on Adv. Manufacturing	C	C	C	C	C	C	C	C	C	C	C	C
Articulation from AAS to BAS	*P*	*P*	*P*	*C*	*P*	*P*	*P*	*C*	*P*	*P*	*P*	*C*
2.4.1: Develop a manufacturing track within existing BAS	P	C*	C*	C*	P	C*	C*	C*	P	C*	C*	C*
2.4.2: Develop MoU for Manufacturing Transfer Students		C*	C*	C*		C*	C*	C*		C*	C*	C*
2.4.3: Launch an advising campaign	P	P	C	C	P	C	C	C	P	C	C	C
2.4.4: Enroll students and evaluate progress		P	P	C		P	P	C	P	P	P	C
Enhance technology-enabled learning	*P*	*C*	*C*	*C*	*P*	*P*	*P*	*C*	*P*	*C*	*C*	*C*
2.5.1: Develop online and blended delivery options	P	C	C	C	P	P	P	C	P	C	C	C
2.5.2: Incorporate online training to supplement hands-on		C	C	C	P	P	C	C	P	C	C	C
2.5.3: Incorporate simulators and tech. into training					P	P	C	C	P	C	C	C

Key: C = Completed, P = In Progress, ■ = Not Applicable, ■ = No Data/No Report, ▨ = Before Start Date, * = Not necessary
Y1 = Fiscal Year 1; Y2 = Fiscal Year 2; Y3 = Fiscal Year 3; Y4 = Fiscal Year 4

Table 3. Milestone Progress by College. Priority 3: Improve the collaboration and alignment between community college programs, the workforce system, and targeted industry employers to keep and create high quality jobs in Iowa.

	DMACC				EICC				HCC				ICCC			
	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4
Engage employers and business associations in a systematic way	*P*	*P*	*P*	*C*	*P*	*P*	*P*	*C*	*P*	*P*	*P*	*C*	*P*	*P*	*P*	*C*
3.1.1: Analyze worker pipeline supply and demand, share needs/data, and develop occupational profiles	P	P	P	C	P	P	P	C	P	P	P	C	P	P	P	C
3.1.2: Create a collaborative, statewide talent development system in high demand occupations and priority programs	P	P	P	C	P	P	P	C	P	P	P	C	P	P	P	C
3.1.3: Communicate with industry to provide education on I-AM initiative	P	P	P	C	P	P	P	C	P	P	P	C	P	P	P	C
3.1.4: Industry representation on grant advisory board, regional workforce partnerships, and development committees	P	P	P	C	P	P	P	C	P	P	P	C	P	P	P	C
3.1.5: Engage employers to promote career pathways and lifelong learning for their employees	P	P	P	C	P	P	P	C	P	P	P	C	P	P	P	C
Engage the workforce in a systematic way	*P*	*P*	*P*	*C*	*P*	*P*	*P*	*C*	*P*	*P*	*P*	*C*	*P*	*P*	*P*	*C*
3.2.1: Create research-informed, data-driven partnerships among industry, education, and workforce development	P	P	P	C	P	P	P	C	P	P	P	C	P	P	P	C
3.2.2: Create joint marketing and outreach opportunities to reach TAA and other dislocated workers	P	P	P	C	P	P	P	C	P	P	P	C	P	P	P	C
3.2.3: Partner on job fairs and mission based special events	P	P	P	C	P	P	P	C	P	P	P	C	P	P	P	C
3.2.4: Collaborate on referral process for the I-AM initiative	P	P	P	C	P	P	P	C	P	P	P	C	P	P	P	C

Key: C = Completed, P = In Progress, ■ = Not Applicable, ■ = No Data/No Report, ▨ = Before Start Date, * = Not necessary
Y1 = Fiscal Year 1; Y2 = Fiscal Year 2; Y3 = Fiscal Year 3; Y4 = Fiscal Year 4

Table 3 (continued). Milestone Progress by College. Priority 3: Improve the collaboration and alignment between community college programs, the workforce system, and targeted industry employers to keep and create high quality jobs in Iowa.

	IHCC				ILCC				IVCC				IWCC			
	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4
Engage employers and business associations in a systematic way	*P*	*P*	*P*	*C*	*P*	*P*	*P*	*C*	*P*	*P*	*P*	*C*	*P*	*P*	*P*	*C*
3.1.1: Analyze worker pipeline supply and demand, share needs/data, and develop occupational profiles	P	P	P	C	P	P	P	C	P	P	P	C	P	P	P	C
3.1.2: Create a collaborative, statewide talent development system in high demand occupations and priority programs	P	P	P	C		P	P	C	P	P	P	C		P	P	C
3.1.3: Communicate with industry to provide education on I-AM initiative	P	P	P	C	P	P	P	C	P	P	P	C	P	P	P	C
3.1.4: Industry representation on grant advisory board, regional workforce partnerships, and development committees	P	P	P	C	P	P	P	C	P	P	P	C	P	P	P	C
3.1.5: Engage employers to promote career pathways and lifelong learning for their employees	P	P	P	C	P	P	P	C	P	P	P	C	P	P	P	C
Engage the workforce in a systematic way	*P*	*P*	*P*	*C*	*P*	*P*	*P*	*C*	*P*	*P*	*P*	*C*	*P*	*P*	*P*	*C*
3.2.1: Create research-informed, data-driven partnerships among industry, education, and workforce development	P	P	P	C	P	P	P	C	P	P	P	C	P	P	P	C
3.2.2: Create joint marketing and outreach opportunities to reach TAA and other dislocated workers	P	P	P	C		P	P	C	P	P	P	C	P	P	P	C
3.2.3: Partner on job fairs and mission based special events	P	P	P	C	P	P	P	C	P	P	P	C	P	P	P	C
3.2.4: Collaborate on referral process for the I-AM initiative	P	P	P	C	P	P	P	C	P	P	P	C	P	P	P	C

Key: C = Completed, P = In Progress, ■ = Not Applicable, ■ = No Data/No Report, ▨ = Before Start Date, * = Not necessary
Y1 = Fiscal Year 1; Y2 = Fiscal Year 2; Y3 = Fiscal Year 3; Y4 = Fiscal Year 4

Table 3 (continued). Milestone Progress by College. Priority 3: Improve the collaboration and alignment between community college programs, the workforce system, and targeted industry employers to keep and create high quality jobs in Iowa.

	KCC				NCC				NIACC				NICC			
	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4
Engage employers and business associations in a systematic way	*P*	*P*	*P*	*C*	*P*	*P*	*P*	*C*	*P*	*P*	*P*	*C*	*P*	*P*	*P*	*C*
3.1.1: Analyze worker pipeline supply and demand, share needs/data, and develop occupational profiles	P	P	P	C	P	P	P	C	P	P	P	C	P	P	P	C
3.1.2: Create a collaborative, statewide talent development system in high demand occupations and priority programs	P	P	P	C	P	P	P	C	P	P	P	C	P	P	P	C
3.1.3: Communicate with industry to provide education on I-AM initiative	P	P	P	C	P	P	P	C	P	P	P	C	P	P	P	C
3.1.4: Industry representation on grant advisory board, regional workforce partnerships, and development committees	P	P	P	C	P	P	P	C	P	P	P	C	P	P	P	C
3.1.5: Engage employers to promote career pathways and lifelong learning for their employees	P	P	P	C	P	P	P	C	P	P	P	C	P	P	P	C
Engage the workforce in a systematic way	*P*	*P*	*P*	*C*	*P*	*P*	*P*	*C*	*P*	*P*	*P*	*C*	*P*	*P*	*P*	*C*
3.2.1: Create research-informed, data-driven partnerships among industry, education, and workforce development	P	P	P	C	P	P	P	C	P	P	P	C	P	P	P	C
3.2.2: Create joint marketing and outreach opportunities to reach TAA and other dislocated workers	P	P	P	C		P	P	C	P	P	P	C	P	P	P	C
3.2.3: Partner on job fairs and mission based special events	P	P	P	C		P	P	C	P	P	P	C	P	P	P	C
3.2.4: Collaborate on referral process for the I-AM initiative	P	P	P	C	P	P	P	C	P	P	P	C	P	P	P	C

Key: C = Completed, P = In Progress, ■ = Not Applicable, ■ = No Data/No Report, ▨ = Before Start Date, * = Not necessary
Y1 = Fiscal Year 1; Y2 = Fiscal Year 2; Y3 = Fiscal Year 3; Y4 = Fiscal Year 4

Table 3 (continued). Milestone Progress by College. Priority 3: Improve the collaboration and alignment between community college programs, the workforce system, and targeted industry employers to keep and create high quality jobs in Iowa.

	SCC				SWCC				WITCC			
	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4
Engage employers and business associations in a systematic way	*P*	*P*	*P*	*C*	*P*	*P*	*P*	*C*	*P*	*P*	*P*	*C*
3.1.1: Analyze worker pipeline supply and demand, share needs/data, and develop occupational profiles	P	P	P	C	P	P	P	C	P	P	P	C
3.1.2: Create a collaborative, statewide talent development system in high demand occupations and priority programs	P	P	P	C	P	P	P	C	P	P	P	C
3.1.3: Communicate with industry to provide education on I-AM initiative	P	P	P	C	P	P	P	C	P	P	P	C
3.1.4: Industry representation on grant advisory board, regional workforce partnerships, and development committees	P	P	P	C	P	P	P	C	P	P	P	C
3.1.5: Engage employers to promote career pathways and lifelong learning for their employees	P	P	P	C	P	P	P	C	P	P	P	C
Engage the workforce in a systematic way	*P*	*P*	*P*	*C*	*P*	*P*	*P*	*C*	*P*	*P*	*P*	*C*
3.2.1: Create research-informed, data-driven partnerships among industry, education, and workforce development	P	P	P	C	P	P	P	C	P	P	P	C
3.2.2: Create joint marketing and outreach opportunities to reach TAA and other dislocated workers	P	P	P	C	P	P	P	C	P	P	P	C
3.2.3: Partner on job fairs and mission based special events	P	P	P	C	P	P	P	C	P	P	P	C
3.2.4: Collaborate on referral process for the I-AM initiative	P	P	P	C	P	P	P	C	P	P	P	C

Key: C = Completed, P = In Progress, ■ = Not Applicable, ■ = No Data/No Report, ▨ = Before Start Date, * = Not necessary
Y1 = Fiscal Year 1; Y2 = Fiscal Year 2; Y3 = Fiscal Year 3; Y4 = Fiscal Year 4

Appendix B:

Student Exit Survey Report:
August 2014 to May 2016

METHODOLOGY

A completion survey to assess students' experiences in I-AM signature programs was developed and distributed to students that had completed their program of study at each of the 15 participating community colleges. The surveys were distributed via electronic link by Project Leads and Advisors/Career Navigators starting in August, 2014 and continued to be distributed through May, 2016. A total of 439 students responded to the survey between August 2014 and May 31, 2016.

Table 1.
Which community college do you attend?

Community College	Number of Respondents
Des Moines Area Community College	56
Eastern Iowa Community Colleges	2
Hawkeye Community College	40
Iowa Central Community College	29
Indian Hills Community College	33
Iowa Lakes Community College	45
Iowa Valley Community College District	30
Iowa Western Community College	34
Kirkwood Community College	6
North Iowa Area Community College	86
Northeast Iowa Community College	37
Northwest Iowa Community College	5
Southeastern Community College	15
Southwestern Community College	7
Western Iowa Tech Community College	14

n=439

Students that responded to the survey represented all of the 15 community colleges (see Table 1). The majority (58.2%) of the students responding indicated that had completed a Welding, 26.1% had completed a Machining/CNC/Tool and Die, and 3.7% had completed an Industrial Maintenance signature program (see Table 2). Students were asked why they had chosen their major/program of study. Students enrolled in the program indicated that they chose the program

because they were interested in this field of study want to work in this field of study (see Table 3). Other students indicated they were interested in strengthening their skills or were enrolled because of the opportunity it provided in getting a better job with a different employer (see Table 3).

Table 2.
What is your major/program of study? (Select one)

Signature Program	Percentage
Industrial Automation	0.0
Industrial Maintenance	3.7
Machining/CNC/Tool & Die	26.1
Manufacturing Technician/Technology	7.4
Robotics	1.4
Transportation & Logistics	0.2
Welding Technician/Technology	58.2
Other (Please specify):	3.0

n=433
Responses from the "Other" choice: EPA Green Training (3)
Associate of arts (2)
Collision Repair and Refinishing (1)
Wind Energy (1)

Table 3.
Why did you choose your major/program of study? (Select all that apply)

Response	Percentage
I am interested in my field of study	53.1
I want to work in my field of study	49.7
I want to strengthen my skills in my field of study	29.3
I need it in order to get an increase in wages or get promoted at my current job	12.0
The degree will allow me to get a better job with a different employer	29.8
Other (please specify):	7.6

Note: The percentages do not add up to 100%.
n=433
Responses from the "Other" choice: New skills (8)
Hobby (3)
Art Work (1)
Dislocated Worker
Employer (7)
Auto body work (2)
Good career field/money (2)
Already in apprenticeship (1)

Students were asked several questions about their reasons for enrolling at their community college, their original educational and career goals, how they heard about the program at their community college, whether they were familiar with Elevate Iowa, and about whether they had completed a certificate program.

Students were asked about their experiences with success coaches/pathway navigators/career coaches at their respective college (e.g., whether they met with an advisor, how often they met with an advisor) and about their opinions with regards to resources such as tutoring, advising, workshops, KeyTrain/Career Ready 101, and Credit for Prior Learning. Students were asked about their level of engagement/involvement in courses and various activities at their community college, to rate their attendance and to give reasons why they missed class. Students were then asked to indicate what things (e.g., equipment, computer) they needed to learn and to indicate whether they had access to everything they needed. In addition, they were asked whether they participated in events held at their community colleges such as career fairs, tours of local industry, and mock interviews with local employers.

Finally, students were asked about third party certifications and about their plans now that they completed their programs. Students were asked whether they plan to continue their education, what their career plans are, and whether they would recommend their signature program to others.

Implementation Analysis Research Question

Students' responses to the completion survey partially answer two of the following TAACCCT grant required research questions:

- How were programs and program design improved or expanded using grant funds?
- Did the grantees conduct an in-depth assessment of participants' abilities, skills, and interests to select participants into the grant program?

In particular, responses provide information about students' experiences with advisors, registration, and tutoring services funded by grant funds. Responses also reflect students' perceptions about the availability and helpfulness of various resources available through their respective community colleges and success coaches/pathway navigators/career coaches. Students were also asked regarding their experiences with various career preparation tools and resources provided by their community colleges.

RESULTS

Enrollment, Educational and Career Goals. Students were asked why they enrolled in their respective community college and program of study. Most of the students (64.0%) reported that they enrolled at their community college because it was close to home, 41.9% enrolled because they could save money, and 29.5% reported that they enrolled because their community college has a close relationship with industry. Others indicated that they had taken classes at their community college in the past (18.8%) and that they were interested in the cutting edge technology (14.4%; see Table 4). Students heard about their program in a variety of ways, including friends (27.9%), school counselor or advisor (27.9%), or family members (17.2%; see Table 5).

Students were asked whether they had heard about the Elevate Iowa Campaign (see Table 6). Slightly less than one-third (30.5%) of the students have heard of the Elevate Iowa campaign, a statewide marketing campaign funded by the I-AM project. Of these students, the majority (77.1%) had heard about the Elevate Iowa campaign from staff at their respective community college, 13.0% heard about it on the radio, and 8.4% heard it about it through Iowa Workforce Development (see Table 7).

When students were asked what their original educational goal was when enrolling into the program, slightly less than half (42.2%) of the students stated that their goal was to complete a certificate program at their community college, 24.2% indicated that their original goal was to earn a diploma, 23.3% indicated that completing an AA/AS degree was their original goal, and the remaining students (10.2%) indicated that their original goal was to take a few classes, learn new skills, or transfer to a 4 year college (see Table 8). Students that indicated their goal was to complete the certificate program were asked whether the certificate was credit or non-credit (see Table 9). The majority (50.8%) of these students reported that the certificate they were completing was a non-credit certificate.

When asked about their original career goal, almost half (45.9%) of the students reported that they wanted to get a job in their field of study and almost 22.5% reported that they wanted to get a job in general and the remainder of students indicated that they wanted to keep their current job (4.2%), get a promotion and/or increase in salary/wages (7.3%) or they wanted to get a better job with a different employer (9.1%; see Table 10).

Advising, Registration, and Tutoring. Students were also asked about their experiences and perceptions about their Success Coach/Pathway Navigator/Career Coach. Almost 73.7% of students indicated that they had met with someone in an advisor role at their community college (see Table 11). Slightly more than half (57.7%) reported that they met with their advisor at least once per semester or monthly, 11.8% met with their advisor once every other week, 13.7% met with an advisor weekly, and 9.9% met with an advisor more than one time per week (see Table 12). Overall, the majority (75.4 to 89.1%) of students agreed that their advisors were friendly, helpful, knowledgeable about program requirements and transferring to another college, available/accessible, and helpful in setting goals (see Table 13).

In general, students reported that their advisors provided the following resources: tutoring, financial aid services/counseling, advising, resume writing, and workshops (see Table 14). A majority (76.6%) of the responding students used advising, 66.0% used financial aid services/counseling, and 56.4% used resume writing. Slightly less than half (49.0%) of the responding students reported that they used workshops and over one-third (37.5%) reported using tutoring services (see Table 14). Overall, students found the resources listed above to be helpful (see Table 14).

KeyTrain/Career Ready 101. Students were asked about their use of KeyTrain/Career Ready 101 (i.e., online preparation resources; see Table 15). Only one-third (29.2%) of the students reported that they used KeyTrain/Career Ready 101 at their community college. Among students that did use KeyTrain/Career Ready 101, 90.1% of students found it useful (see Table 16). A couple of students indicated that it was not useful because they did not learn from it and it was not used in order to get a job in their field (see Table 17). Among students that indicated it was helpful, it was used for math remediation, improvement in the National Career Readiness Certificate (NCRC) score, and resume writing (see Table 18). Among students that reported that they did not use Key Train/Career Ready 101, 44.1% reported that it was not offered to them and 29.1% did not see the value in it (see Table 19). The remaining students indicated various reasons for not using it such as not knowing about it, not having time, or had already taken the NCRC (see Table 19).

Less than one-third (26.3%) of the students reported that someone (e.g., advisor, career navigator, success coach) discussed Credit for Prior Learning with them (see Table 20). Students that indicated that they had discussed Credit for Prior Learning were asked whether they sought out Credit for Prior Learning. The majority (53.2%) of these students did not, 28.8% reported that they did and were able to earn credit as a result of going through the process and 18% reported that they did had sought Credit for Prior Learning but were unable to earn credit as a result (see Table 21)

Student Engagement. Students were asked to rate their level of class attendance (see Table 22). Overall, the majority (78.2%) of the students reported that they either never missed a class or were rarely absent from class, 19.0% reported some absences and 2.9% reported excessive absences (see Table 22). The most common reasons for missing class included: illness, issues with child care, or other obligations such as medical issues, needing to work, or transportation issues (see Table 23).

Students were asked whether they perceived any gaps in being able to learn due to not having access to things they need to do so (see Table 24). The majority (94.5%) of students felt that they did have access to everything they needed in order to learn. Among students that indicated they do not have all that they needed, they indicated that they needed materials or more/better instructors (see Table 25).

Students were also asked whether they participated in job fair type events organized by their community college (see Table 26). The majority (60.4%) of the students responding participated

in industry tours. 49.4% participated in the career fairs, 30.7% participated in mock interviews with employers, and 34.1% took advantage of having an employer look over their resume (see Table 26).

Future Career and Educational Plans. Students were asked to identify all of the third party certifications they took as students (see Table 27). Slightly less than half (41.5%) of the students took the NCRC as their third party certification, 31.3% took the American Welding Society (AWS) certification, 12.6% took the Manufacturing Skills Standards Council Certified Production Technician (MSSC CPT) certification, and 7.7% took the National Institute for Metalworking Skills (NIMS) certification. Students were asked why they had chosen to take the third party certification (see. Table 28). Approximately 52.3% of the students who took the third party certifications reported that it was a requirement of their program, 40.0% reported that they thought it would help them get a job, 39.6% reported that they took it for personal satisfaction, and 15.8% took it because it helped students advance in their job (see Table 29). Several students reported that they did not take the third party certification because they did not know it was available, while others reported that it was not needed, or they were not ready to take it (see Table 29).

Students were asked whether they planned to continue their education now that they have completed the program. A majority (70.1%) of the students reported that they plan to continue their education with 38.0% planning to continue their education right away and about one-third (32.1%) indicated that they will take a break before returning to continue their education. The remaining 29.8% indicated that they do not have plans to continue their education.

Students were also asked about their career plans now that they have completed the program. Slightly less than half (46.8%) reported that they will seek employment, 16.5% will begin a new job that they have already secured, and 12.6% reported that they will continue in their current job along with a salary increase and/or promotion (see Table 31).

Students were asked whether they would recommend their program to others. The majority (98.2%) of the students responded that they would recommend their program of study to others.

The following section describes results from the Student Completion survey: Enrollment/Goals, Advising/Registration and Tutoring, Engagement, and Career Questions.

ENROLLMENT/GOALS

The following section describes students' reasons for enrolling at their respective community college, how they heard about the community college, choosing a particular major/program, whether they are familiar with the Elevate Iowa campaign and to indicate their educational and career goals.

Table 4.
Why did you enroll at your community college? (Select all that apply)

Response	Percentage
Close to home	64.0
Cost savings	41.9
Cutting edge technology	14.4
Challenging classes	7.7
I've taken classes at the community college in the past	18.8
Easy to transfer to another community college	5.3
My community college has a close relationship with business and industry	29.5
Other	9.1

Note: The percentages do not add up to 100%.
n=430
Responses from the "Other" choice:
Good program (7)
Better job (3)
Athletics (2)
Employer (2)
Instructors (2)
Lost job (2)
Broke (1)
Certification (1)
Had specific courses (1)
In depth classes (1)
Job service (1)
NAFTA (1)
Right college (1)
Transferred (1)
WIA (1)

Table 5.
How did you hear about your major/program of study? (Select all that apply)

Marketing Mediums	Percentage
Television	4.7
Radio	7.9
Social media (e.g., Facebook, Twitter, YouTube)	5.1
School counselor or advisor	27.9
I have previously taken classes at this community college	12.6
Employer/work	12.1
I heard about it from a friend	27.9
I heard about it from a family member	17.2
Flyer	6.7
Workforce Development	13.0
Other (please specify)	12.8

Note: The percentages do not add up to 100%.
n=430
Responses from the "Other" choice: Website/Online/Research (11)
Employer (3)
Newspaper (3)
Sports (3)
Billboard (2)
Job Fair (2)
Tour (2)
Vocational Rehab (2)
College Advisor (1)
Dislocated Worker (1)
Far enough away (1)
Project of Iowa (1)
Walk-in (1)

Table 6.
Have you heard about the Elevate Iowa campaign? (Select one)

Response	Percentage
Yes	30.5
No	69.5

n=430

Table 7.
How did you hear about the Elevate Iowa campaign? (Select all that apply)

Marketing Mediums	Percentage
Radio	13.0
Facebook	4.6
Flyer/handout	6.1
Website – Elevateiowa.com	4.6
Event	8.4
From a friend or family member	5.3
From work, employer, or colleague	3.8
At my community college/from community college staff	77.1
Workforce Development	5.3
Other (please specify)	5.3

Note: The percentages do not add up to 100%.
n=131
Responses from the "Other" choice: Employer (1)
Manufacturing Day (1)
Pandora (1)

Table 8.
What was your original <u>educational</u> goal when you enrolled? (Please select the one that best describes your goal)

Educational Goal	Percentage
Take a few classes	5.1
Complete a Certificate Program	42.2
Complete a Diploma	24.2
Complete an AA/AS degree	23.3
Transfer to a 4 year college	2.8
Other	2.3

n=248
Responses from the "Other" choice: New skills (3)
Weld for personal use (2)
Change of career (1)
Earn journeyman's card (1)
GED (1)

Table 9.
You indicated that your original goal was to complete a certificate. Was the certificate for credit or non-credit?

Certificate Options	Percentage
Credit Certificate	32.0
Non-Credit Certificate	50.8
I don't know	17.1

n=181

Table 10.
What was your original career goal when you enrolled? (Please select the one that best describes your goal)

Career Goal	Percentage
Get a job	22.5
Get a job in my field	45.9
Keep my current job	4.2
Get a promotion and/or increase my salary/wages at my current job	7.3
Get a better job with different employer within the same field as my current job	9.1
Other	11.0

n=427

Responses from the "Other" choice:

Career change (14)
Increase knowledge (9)
More money (5)
Self employed (2)
Weld for personal use (2)
CPIM certification (1)
Learn a trade (1)
Retraining (1)
Transfer (1)

ADVISING/REGISTRATION AND TUTORING

The following section describes students' perceptions of their Success Coach/Pathway Navigator/Career Counselor, how often they meet with them, their perceptions of the KeyTrain/Career Ready 101 training programs, and whether they were aware of Credit for Prior Learning.

Table 11.
Have you met with someone at your community college who helps you do things like schedule classes, figure out other resources on campus, look for jobs, or just check on you? These people go by titles like Success Coach, Pathway Navigator, and Career Counselor. (Select one)

Responses	Percentage
Yes	73.7
No	26.3

n=426

Table 12.
How often do you meet with your Success Coach/Pathway Navigator/Career Counselor? (Select one)

Meeting Times	Percentage
Once per semester	27.7
Monthly	29.9
Once every other week	11.8
Once per week	13.7
More than once per week	9.9
I have not met with a Success Coach/Pathway Navigator/Career Counselor in the past year	7.0

n=314

Please indicate the extent with which you agree with the following statements.

Table 13.
My Success Coach/Pathway Navigator/Career Counselor…

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Total Agree
is friendly	313	5.7	0.6	4.8	21.4	67.7	89.1
is helpful	313	5.7	0.6	4.8	23.6	65.6	89.2
is knowledgeable about program requirements	313	5.1	1.3	7.3	24.6	61.7	86.3
is knowledgeable about requirements for transferring to another college	313	4.2	1.0	19.5	23.6	51.8	75.4
is available and/or accessible	313	4.8	1.6	6.1	27.8	59.7	87.5
helped me set goals	313	5.1	1.0	13.1	25.2	55.6	80.8

Note: Values reflect percentages.

Table 14.
In the following section, we are interested in whether your received any of the resources listed below from your Success Coach/Pathway Navigator/Career Counselor or someone at your community college and the extent with which you thought these resources were helpful.

		Did you receive any of the resources listed on the left from the *Success Coach/ Pathway Navigator/Career Counselor?*		Please rate the level of helpfulness of the resources provided by the *Success Coach/Pathway Navigator/Career Counselor*			
Resources	*n*	Yes	No	Not at all Helpful	Slight Helpful	Fairly Helpful	Very Helpful
Tutoring	312	37.5	62.5	9.2	5.6	18.3	66.9
Financial Aid Services/Counseling	312	66.0	34.0	4.1	6.9	14.2	74.8
Advising	312	76.6	23.4	4.6	3.2	13.4	78.9
Resume writing	312	56.4	43.6	5.3	3.2	17.6	73.8
Workshops	312	49.0	51.0	7.9	4.2	14.5	73.3

Note: Values reflect percentages.

Table 15.
Did you use KeyTrain/Career Ready 101 at your college? KeyTrain and Career Ready 101 are online resources that help student prepare to take the NCRC, and other resources like math tutoring and learning about personal finance.

Response	Percentage
Yes	29.2
No	70.8

n=312

Table 16.
Did you find KeyTrain/Career Ready 101 useful?

Response	Percentage
Yes	90.1
No	9.9

n=91

Table 17.
Tell us why you didn't find KeyTrain/Career Ready 101 useful.

Responses Provided	Percentage
Did not use it to get a job	40.0
Did not learn from it	20.0
Not the correct format for studying	20.0
Other	20.0

n=5

Table 18.
What components of KeyTrain/Career Ready 101 did you use?

KeyTrain Components	Percentage
Math remediation	42.9
To improve my NCRC score	51.6
Resume writing	35.2
Financial literacy	16.5
Other (please specify)	9.9

Note: The percentages do not add up to 100%.
n=91
Responses from the "Other" choice: I don't know (1)
Practice test (1)

Table 19.
Why didn't you use KeyTrain/Career Ready 101?

Response	Percentage
Not offered	44.1
Did not see the value	29.1
Other (please specify)	26.8

n=220
Responses from the "Other" choice: Did not know about (23)
Already done (9)
Night program (1)
Work (1)
Did not need (11)
Couldn't take (1)
Used Tooling U (1)

Table 20.
Did anyone (e.g., Advisor, Career Navigator, Success Coach, Pathway Navigator, Career Counselor, Instructor) at your college talk to you about "Credit for Prior Learning?" Credit for Prior Learning is sometimes called "experience credit" or "alternative credit". Students earn college credit for what they already know or have learned someplace else. (Select one)

Response	Percentage
Yes	26.3
No	73.7

n=422

Table 21.
Did you seek college credit for your prior experiences or knowledge gained outside of your college?

Credit for Prior Learning	Percentage
Yes, I did earn credit through the process	28.8
Yes, but I did not earn credit through the process	18.0
No	53.2

n=111

ENGAGEMENT

The following section describes students' rating of their class attendance, reasons, if any, for missing class, whether they have all they need to learn, and their participation in community college organized events.

Table 22.
In general, how would you rate your class attendance? (Select one)

Absences	Percentage
Excessive absences	2.9
Some absences	19.0
Rarely absent	44.2
Never miss class	34.0

n=421

Table 23.
If you miss class, what are the main reasons for missing class? (Select all that apply)

Reasons for Missing Class	Percentage
Illness	40.9
Child care issues	9.5
Transportation issues	12.6
Need to work/can't get time off	14.0
Other	17.6
Never miss class	26.6

Note: The percentages do not add up to 100%.
n=421
Responses from the "Other" choice: Family issues/emergencies (13)
Vacation/prior engagement (11)
Appointment (6)
Medical (6)
Work (6)
Funeral (5)
Sleep (3)
Moving (2)
Weather (2)
Bus late (1)
Firefighter calls (1)
Irresponsibility (1)
Live far away (1)
Military (1)
Physics isn't my thing (1)

Table 24.
Did you have access to everything you need in order to learn?

Response	Percentage
Yes	94.5
No	5.5

n=421

Table 25.
What did you need in order to learn?

Responses	Percentage
Materials	31.8
More/better instructors	22.7
Computer	9.1
Hands on environment	9.1
Better class environment	4.5
Better transportation	4.5
Listen and learn	4.5
More classes	4.5
Own welding helmet	4.5
Silence	4.5

n=22

Table 26.
Did you participate in any of the following events organized by your community college?

Events	*n*	Yes	No
Career fair	395	49.4	50.6
Tour of industry	391	60.4	39.6
Employer looked over my resume	384	34.1	65.9
Mock interviews with employers	384	30.7	69.3
Other (please specify)	181	8.3	97.1

Note: Values reflect percentages.
Responses from the "Other" choice: Field trip (1)
Career readiness (1)

CAREER AND EDUCATIONAL PLANS

The following section describes third party certifications taken by students, why they chose those specific certification, students' future education and career plans, and whether they would recommend program to others.

Table 27.
Which third party certification did you take? (Select all that apply)

Certifications	Percentage
AWS (American Welding Society)	31.3
NIMS (National Institute for Metalworking Skills)	7.7
MSSC CPT (Manufacturing Skills Standards Council Certified Production Technician)	12.6
MSSC CLT (Manufacturing Skills Standards Council Certified Logistics Technician)	0.3
APICS CPIM (American Production and Inventory Control Society Certified in Production and Inventory Management)	0.8
APICS CSCP (American Production and Inventory Control Society Certified Supply Chain Professional)	0.0
SME (Society of Manufacturing Engineers)	0.0
NCRC (National Career Readiness Certificate)	41.5
Did not take any certifications	26.9

Note: The percentages do not add up to 100%.
n=390

Table 28.
Why did you choose to take the third party certification? (Select all that apply)

Responses	Percentage
Helped me get a job	40.0
Was a requirement of my program	52.3
Helped me advance in my job	15.8
Personal satisfaction	39.6
Other (please specify)	3.9

Note: The percentages do not add up to 100%.
n=285
Responses from "Other" choice:
Needed skills (4)
Confidence builder (1)
Emily told me to (1)
Increase knowledge (1)
Thought it would help me get a job (1)
To complete advanced welding program (1)

Table 29.
Why did you choose not to take the third party certification? (Select all that apply)

Reasons for No Third Party Certification	Percentage
Too costly	6.7
I did not see the value	0.0
Too challenging	21.9
Other (please specify)	11.4
Did not know it was available	60.0

n=105
Responses from "Other" choice:
Will do later (8)
Chose not to (3)
No time (3)
Not offered (3)
Done before (1)
Live elsewhere (1)
Told we could, but now we can't (1)

Table 30.
Now that you have completed the program do you plan to continue your education?

Education Plans	Percentage
Yes, I plan to continue my education now	38.0
Yes, but I will take a break for now and return sometime in the future	32.1
No, I don't plan to continue my education	29.8

n=389

Table 31.
What are your career plans now that you have completed the program? (Select the one that best describes your plans)

Career Plans	Percentage
Seek internship	5.4
Begin internship secured before completion of program	1.8
Seek employment	46.8
Begin new job (have already secured a position)	16.5
Begin new position with current employer	3.3
Continue current job with salary increase and/or promotion	12.6
Other (please specify)	13.6

n=389

Responses from "Other" choice:
Continue education (32)
Own/start business (4)
Higher paying job (3)
Navy/military (2)
Weld for personal use (1)

Table 32.
I would recommend this program to others.

Response	Percentage
Yes	98.2
No	1.8

n=389

Appendix C:

Student Exit Survey Report:
August 2014 to October 2014

METHODOLOGY

A completion survey to assess students' experiences in I-AM signature programs was developed and distributed to students that had completed their program of study at each of the 15 participating community colleges. The surveys were distributed via electronic link by Project Leads and Advisors/Career Navigators starting in August, 2014 and was continuously distributed to students as they completed their programs. This survey report contains the responses for all the students who took this survey on or before October 23, 2014. A total of 27 responded to the survey.

Table 1.
Which community college do you attend?

Community College	Number of Students Responding
Des Moines Area Community College	0
Eastern Iowa Community Colleges	0
Hawkeye Community College	0
Iowa Central Community College	3
Indian Hills Community College	4
Iowa Lakes Community College	2
Iowa Valley Community College District	0
Iowa Western Community College	0
Kirkwood Community College	3
North Iowa Area Community College	4
Northeast Iowa Community College	7
Northwest Iowa Community College	3
Southeastern Community College	0
Southwestern Community College	0
Western Iowa Tech Community College	1

n=27

Students that responded to the survey represented eight of the 15 community colleges (see Table 1). Almost half (42.3%) of the students responding indicated that had completed a Welding

Technician/Technology, 30.8% had completed a Machining/CNC/Tool and Die, and 7.7% had completed an Industrial Maintenance signature program (see Table 2). Students were asked why they had chosen their major/program of study. Students enrolled in the program indicated that they chose the program because they were interested in this field of study and want to work in this field of study (see Table 3). Other students indicated they were interested in strengthening their skills or were enrolled because of the opportunity it provided in getting a better job with a different employer (see Table 3).

Table 2.
What is your major/program of study? (Select one)

Signature Program	Percentage
Industrial Automation	0.0
Industrial Maintenance	7.7
Machining/CNC/Tool & Die	30.8
Manufacturing Technician/Technology	15.4
Robotics	0.0
Transportation & Logistics	0.0
Welding Technician/Technology	42.3
Other (Please specify):	3.8

n=26
Responses from the "Other" choice: Associate of Arts (1)

Table 3.
Why did you choose your major/program of study? (Select all that apply)

Response	Percentage
I am interested in my field of study	50.0
I want to work in my field of study	46.2
I want to strengthen my skills in my field of study	19.2
I need it in order to get an increase in wages or get promoted at my current job	7.7
The degree will allow me to get a better job with a different employer	26.9
Other (please specify):	11.5

Note: The percentages do not add up to 100%.
n=26
Responses from the "Other" choice: Enjoy it (1)
Took program because I was made to feel like there were jobs (1)

Students were asked several questions about their reasons for enrolling at their community college, their original educational and career goals, how they heard about the program at their community college, whether they were familiar with Elevate Iowa, and about whether they had completed a certificate program.

Students were asked about their experiences with success coaches/pathway navigators/career coaches at their respective community college (e.g., whether they met with an advisor, how often they met with an advisor) and about their opinions with regards to resources such as tutoring, advising, workshops, KeyTrain/Career Ready 101, and Credit for Prior Learning. Students were asked about their level of engagement/involvement in courses and various activities at their community college, to rate their attendance and to give reasons why they missed class. Students were then asked to indicate what things (e.g., equipment, computer) they needed to learn and to indicate whether they had access to everything they needed. In addition, they were asked whether they participated in events held at their community colleges such as career fairs, tours of local industry, and mock interviews with local employers.

Finally, students were asked about third party certifications and about their plans now that they completed their programs. Students were asked whether they plan to continue their education, what their career plans are, and whether they would recommend their signature program to others.

Implementation Analysis Research Questions

Students' responses to the completion survey partially answer two of the following TAACCCT grant required research questions:

- How were programs and program design improved or expanded using grant funds?
- Did the grantees conduct an in-depth assessment of participants' abilities, skills, and interests to select participants into the grant program?

In particular, responses provide information about students' experiences with advisors, registration, and tutoring services funded by grant funds. Responses also reflect students' perceptions about the availability and helpfulness of various resources available through their respective community colleges and success coaches/pathway navigators/career coaches. Students were also asked regarding their experiences with various career preparation tools and resources provided by their community colleges.

RESULTS

Enrollment, Educational and Career Goals. Students were asked why they enrolled in their respective community college and program of study. Most of the students (80.0%) reported that they enrolled at their community college because it was close to home, 48.0% enrolled because they could save money, and 40.0% reported that they enrolled because their community college has a close relationship with industry. Others indicated that they had taken classes at their community college in the past (12.0%) and that they were interested in the cutting edge technology (24.0%; see Table 4). Students heard about their program in a variety of ways, including friends (24.0%), school counselor or advisor (28.0%), or family members (12.0%; see Table 5).

Students were asked whether they had heard about the Elevate Iowa Campaign (see Table 6). Only a few (16.0%) of the students have heard of the Elevate Iowa campaign, a statewide marketing campaign funded by the I-AM project. Of these students, the majority (75.0%) had heard about the Elevate Iowa campaign from staff at their respective community college, 50.0% heard about it on the radio, and 25.0% heard it about it through Iowa Workforce Development (see Table 7).

When students were asked what their original educational goal was when enrolling into the program, 70.8% of the students stated that their goal was to complete a certificate program at their community college, 12.5% indicated that their original goal was to earn a diploma, 12.5% indicated that completing an AA/AS degree was their original goal, and the remaining students (4.2%) indicated that their original goal was to transfer to a 4 year college (see Table 8). Students that indicated their goal was to complete the certificate program were asked whether the certificate was credit or non-credit (see Table 9). The majority (58.8%) of these students reported that the certificate they were completing was a non-credit certificate.

When asked about their original career goal, almost half (54.2%) of the students reported that they wanted to get a job in their field of study and almost 25.0% reported that they wanted to get a job in general and the remainder of students indicated that they wanted to get a promotion and/or increase in salary/wages (4.2%) or they wanted to get a better job with a different employer (4.2%; see Table 10).

Advising, Registration, and Tutoring. Students were also asked about their experiences and perceptions about their Success Coach/Pathway Navigator/Career Coach. Almost 82.6% of students indicated that they had met with someone in an advisor role at their community college (see Table 11). Slightly more than half (63.1%) reported that they met with their advisor at least once per semester or monthly, 10.5% met with their advisor once every other week, and 15.8% met with an advisor weekly, (see Table 12). Overall, the majority (61.3% – 84.2%) of students agreed that their advisors were friendly, helpful, knowledgeable about program requirements and transferring to another college, available/accessible, and helpful in setting goals (see Table 13).

In general, students reported that their advisors provided the following resources: tutoring, financial aid services/counseling, advising, resume writing, and workshops (see Table 14). A majority (83.3%) of the responding students used advising, 61.1% used financial aid services/counseling, and 50.0% used resume writing. Slightly more than half (55.6%) of the responding students reported that they used workshops and over one-third (38.9%) reported using tutoring services (see Table 14). Overall, students found the resources listed above to be helpful (see Table 14).

KeyTrain/Career Ready 101. Students were asked about their use of KeyTrain/Career Ready 101 (i.e., online preparation resources; see Table 15). Less than one-third (22.2%) of the students reported that they used KeyTrain/Career Ready 101 at their community college. Among the few students that did use KeyTrain/Career Ready 101, all of them found it useful (see Table 16). Among students that indicated it was helpful, it was used for math remediation, improvement in the National Career Readiness Certificate (NCRC) score, and resume writing (see Table 17). Among students that reported that they did not use Key Train/Career Ready 101, 57.1% reported that it was not offered to them and 21.4% did not see the value in it (see Table 18).

Only 13.6% of the students reported that someone (e.g., advisor, career navigator, success coach) discussed Credit for Prior Learning with them (see Table 19). Students that indicated that they had discussed Credit for Prior Learning were asked whether they sought out Credit for Prior Learning. About one-third (33.3%) reported that they did and were able to earn credit as a result of going through the process and 66.7% reported that they did not seek out Credit for Prior Learning (see Table 20).

Student Engagement. Students were asked to rate their level of class attendance (see Table 21). Overall, the majority (95.4%) of the students reported that they either never missed a class or were rarely absent from class, and 4.5% reported excessive absences (see Table 21). The most common reasons for missing class included: illness, issues with child care, or other obligations such as medical issues, needing to work, or transportation issues (see Table 23).

Students were asked whether they perceived any gaps in being able to learn due to not having access to things they need to do so (see Table 23). The majority (95.5%) of students felt that they did have access to everything they needed in order to learn. Among those students that indicated they did not have all that they needed, they indicated that they needed books (see Table 24).

Students were also asked whether they participated in job fair type events organized by their community college (see Table 25). The majority (72.7%) of the students responding participated in industry tours. 45.5% participated in the career fairs, 36.4% participated in mock interviews with employers, and 27.3% took advantage of having an employer look over their resume (see Table 25).

Future Career and Educational Plans. Students were asked to identify all of the third party certifications they took as students (see Table 26). Slightly more than half (55.0%) of the students took the NCRC as their third party certification, 23.0% took the American Welding Society (AWS) certification, 18.0% took the Manufacturing Skills Standards Council Certified Production Technician (MSSC CPT) certification, and 14.0% took the National Institute for Metalworking Skills (NIMS) certification. Students were asked why they had chosen to take the third party certification (see. Table 26). Approximately 47.0% of the students who took the third party certifications reported that it was a requirement of their program, 53.0% reported that they thought it would help them get a job, 41.0% reported that they took it for personal satisfaction, and 6.0% took it because it helped students advance in their job (see Table 27). Several students reported that they did not take the third party certification because they did not know it was available (see Table 28).

Students were asked whether they planned to continue their education now that they have completed the program. Over half (57.1%) of the students reported that they plan to continue their education with 33.3% plan to continue their education right away and about one-fourth (23.8%) indicated that they will take a break before returning to continue their education. The remaining 42.9% indicated that they do not have plans to continue their education (see Table 29).

Students were also asked about their career plans now that they have completed the program. Approximately 23.8% reported that they will seek employment, 42.9% will begin a new job that they have already secured, and 9.5% reported that they are in the process of seeking an internship (see Table 30).

Students were asked whether they would recommend their program to others. The majority (95.2%) of the students responded that they would recommend their program of study to others.

The following section describes results from the Student Completion survey: Enrollment/Goals, Advising/Registration and Tutoring, Engagement, and Career Questions.

ENROLLMENT/GOALS

The following section describes student responses indicating decisions for enrolling at a particular community college/choosing a particular major/program, awareness of the Elevate Iowa campaign, and students' educational and career goals.

Table 4.
Why did you enroll at your community college? (Select all that apply)

Response	Percentage
Close to home	80.0
Cost savings	48.0
Cutting edge technology	24.0
Challenging classes	8.0
I've taken classes at the community college in the past	12.0
Easy to transfer to another community college	0.0
My community college has a close relationship with business and industry	40.0
Other	16.0

Note: The percentages do not add up to 100%.
n=25
Responses from the "Other" choice: Class was paid for (1)
Job Service recommended (1)
NAFTA (1)
Student was told jobs were available (1)

Table 5.
How did you hear about your major/program of study? (Select all that apply)

Marketing Mediums	Percentage
Television	0.0
Radio	0.0
Social media (e.g., Facebook, Twitter, YouTube)	4.0
School counselor or advisor	28.0
I have previously taken classes at this community college	16.0
Employer/work	0.0
I heard about it from a friend	24.0
I heard about it from a family member	12.0
Flyer	16.0
Workforce Development	20.0
Other (please specify)	12.0

Note: The percentages do not add up to 100%.
n=25
Responses from the "Other" choice: Newspaper (1)
Similar classes at high school (1)
Veterans (1)

Table 6.
Have you heard about the Elevate Iowa campaign? (Select one)

Response	Percentage
Yes	16.0
No	84.0

n=25

Table 7.
How did you hear about the Elevate Iowa campaign? (Select all that apply)

Marketing Mediums	Percentage
Radio	50.0
Facebook	0.0
Flyer/handout	0.0
Website – Elevateiowa.com	0.0
Event	0.0
From a friend or family member	0.0
From work, employer, or colleague	0.0
At my community college/from community college staff	75.0
Workforce Development	25.0
Other (please specify)	25.0

Note: The percentages do not add up to 100%.
n=4
Responses from the "Other" choice: Pandora (1)

Table 8.
What was your original educational goal when you enrolled? (Please select the one that best describes your goal)

Educational Goal	Percentage
Take a few classes	0.0
Complete a Certificate Program	70.8
Complete a Diploma	12.5
Complete an AA/AS degree	12.5
Transfer to a 4 year college	4.2
Other	0.0

n=24
Responses from the "Other" choice: None

Table 9.
You indicated that your original goal was to complete a certificate. Was the certificate for credit or non-credit?

Certificate Options	Percentage
Credit Certificate	35.3
Non-Credit Certificate	58.8
I don't know	5.9

n=17

Table 10.
What was your original career goal when you enrolled? (Please select the one that best describes your goal)

Career Goal	Percentage
Get a job	25.0
Get a job in my field	54.2
Keep my current job	0.0
Get a promotion and/or increase my salary/wages at my current job	4.2
Get a better job with different employer within the same field as my current job	4.2
Other	12.5

n=24

Responses from the "Other" choice:

Get a better job in a different field (1)
Get a second job (1)
Personal enhancement (1)

ADVISING/REGISTRATION AND TUTORING

The following section describes students' experiences and perceptions about their Success Coach/Pathway Navigator/Career Counselor, use of KeyTrain/Career Ready 101 training programs and students' awareness and use of Credit for Prior Learning opportunities at their respective community college.

Table 11.
Have you met with someone at your community college who helps you do things like schedule classes, figure out other resources on campus, look for jobs, or just check on you? These people go by titles like Success Coach, Pathway Navigator, and Career Counselor. (Select one)

Responses	Percentage
Yes	82.6
No	17.4

n=23

Table 12.
How often do you meet with your Success Coach/Pathway Navigator/Career Counselor? (Select one)

Meeting Times	Percentage
Once per semester	36.8
Monthly	26.3
Once every other week	10.5
Once per week	15.8
More than once per week	0.0
I have not met with a Success Coach/Pathway Navigator/Career Counselor in the past year	10.5

n=19

Table 13.
My Success Coach/Pathway Navigator/Career Counselor…

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Total Agree
is friendly	19	10.5	0.0	5.3	36.8	47.4	84.2
is helpful	19	10.5	0.0	5.3	36.8	47.4	84.2
is knowledgeable about program requirements	19	5.3	5.3	15.8	26.3	47.4	73.7
is knowledgeable about requirements for transferring to another college	19	5.3	5.3	26.3	36.8	26.3	61.3
is available and/or accessible	19	10.5	0.0	10.5	31.6	47.4	79.0
helped me set goals	19	10.5	0.0	10.5	26.3	52.6	78.9

Note: Values reflect percentages.

Table 14.
In the following section, we are interested in whether your received any of the resources listed below from your Success Coach/Pathway Navigator/Career Counselor or someone at your community college and the extent with which you thought these resources were helpful.

		Did you receive any of the resources listed on the left from the Success Coach/ Pathway Navigator/Career Counselor?		*Please rate the level of helpfulness of the resources provided by the Success Coach/Pathway Navigator/Career Counselor*			
Resources	*n*	Yes	No	Not at all Helpful	Slight Helpful	Fairly Helpful	Very Helpful
Tutoring	18	38.9	61.1	0.0	12.5	12.5	75.0
Financial Aid Services/Counseling	18	61.1	38.9	0.0	0.0	27.3	72.7
Advising	18	83.3	16.7	0.0	0.0	13.3	86.7
Resume writing	18	50.0	50.0	0.0	0.0	36.4	63.6
Workshops	18	55.6	44.4	0.0	0.0	27.3	72.7

Note: Values reflect percentages.

Table 15.
Did you use KeyTrain/Career Ready 101 at your college? KeyTrain and Career Ready 101 are online resources that help student prepare to take the NCRC, and other resources like math tutoring and learning about personal finance.

Response	Percentage
Yes	22.2
No	77.8

n=18

Table 16.
Did you find KeyTrain/Career Ready 101 useful?

Response	Percentage
Yes	100.0
No	0.0

n=4

Table 17.
What components of KeyTrain/Career Ready 101 did you use?

KeyTrain Components	Percentage
Math remediation	75.0
To improve my NCRC score	75.0
Resume writing	25.0
Financial literacy	0.0
Other (please specify)	0.0

Note: The percentages do not add up to 100%.
n=4
Responses from the "Other" choice: None
Practice for NCRC (1)

Table 18.
Why didn't you use KeyTrain/Career Ready 101?

Response	Percentage
Not offered	57.1
Did not see the value	21.4
Other (please specify)	21.4

n=14

Responses from the "Other" choice:

Already took NCRC (1)
Never heard of it (1)
Not interested (1)

Table 19.
Did anyone (e.g., Advisor, Career Navigator, Success Coach, Pathway Navigator, Career Counselor, Instructor) at your college talk to you about "Credit for Prior Learning?" Credit for Prior Learning is sometimes called "experience credit" or "alternative credit". Students earn college credit for what they already know or have learned someplace else. (Select one)

Response	Percentage
Yes	13.6
No	86.4

n=22

Table 20.
Did you seek college credit for your prior experiences or knowledge gained outside of your college?

Credit for Prior Learning	Percentage
Yes, I did earn credit through the process	33.3
Yes, but I did not earn credit through the process	0.0
No	66.7

n=3

ENGAGEMENT

The following section describes students' engagement, for example, class attendance, reasons for missing class, perceived gaps in having what is needed to learn, and their involvement with community college organized events.

Table 21.
In general, how would you rate your class attendance? (Select one)

Absences	Percentage
Excessive absences	4.5
Some absences	0.0
Rarely absent	40.9
Never miss class	54.5

n=22

Table 22.
If you miss class, what are the main reasons for missing class? (Select all that apply)

Reasons for Missing Class	Percentage
Illness	41.0
Child care issues	9.0
Transportation issues	0.0
Need to work/can't get time off	9.0
Other (e.g., military, missed alarm)	14.0
Never miss class	41.0

Note: The percentages do not add up to 100%.
n=22

Table 23.
Did you have access to everything you need in order to learn?

Response	Percentage
Yes	95.5
No	4.5

n=22

Table 24.
What did you need in order to learn?

Responses Provided	Percentage
Books	100.0

n=1

Table 25.
Did you participate in any of the following events organized by your community college?

Events	*n*	Yes	No
Career fair	22	45.5	54.5
Tour of industry	22	72.7	27.3
Employer looked over my resume	22	27.3	72.7
Mock interviews with employers	22	36.4	63.6
Other (please specify)	22	0.0	100.0

Note: Values reflect percentages.
Responses from the "Other" choice: None

CAREER AND EDUCATIONAL PLANS

The following section describes results of percentage of students taking third party certification, students' future educational and career plans and whether students would recommend this program to others.

Table 26.
Which third party certification did you take? (Select all that apply)

Certifications	Percentage
AWS (American Welding Society)	23.0
NIMS (National Institute for Metalworking Skills)	14.0
MSSC CPT (Manufacturing Skills Standards Council Certified Production Technician)	18.0
MSSC CLT (Manufacturing Skills Standards Council Certified Logistics Technician)	0.0
APICS CPIM (American Production and Inventory Control Society Certified in Production and Inventory Management)	0.0
APICS CSCP (American Production and Inventory Control Society Certified Supply Chain Professional)	0.0
SME (Society of Manufacturing Engineers)	0.0
NCRC (National Career Readiness Certificate)	55.0
Did not take any certifications	23.0

Note: The percentages do not add up to 100%.
n=22

Table 27.
Why did you choose to take the third party certification? (Select all that apply)

Responses	Percentage
Helped me get a job	53.0
Was a requirement of my program	47.0
Helped me advance in my job	6.0
Personal satisfaction	41.0
Other (please specify)	6.0

Note: The percentages do not add up to 100%.
n=17
Responses from "Other" choice: Thought it would help me get a job (1)

Table 28.
Why did you choose not to take the third party certification? (Select all that apply)

Reasons for No Third Party Certification	Percentage
Too costly	0.0
I did not see the value	0.0
Too challenging	0.0
Other (please specify)	0.0
Did not know it was available	100.0

n=5
Responses from "Other" choice: None

Table 29.
Now that you have completed the program do you plan to continue your education?

Education Plans	Percentage
Yes, I plan to continue my education now	33.3
Yes, but I will take a break for now and return sometime in the future	23.8
No, I don't plan to continue my education	42.9

n=21

Table 30.
What are your career plans now that you have completed the program? (Select the one that best describes your plans)

Career Plans	Percentage
Seek internship	9.5
Begin internship secured before completion of program	0.0
Seek employment	23.8
Begin new job (have already secured a position)	42.9
Begin new position with current employer	4.8
Continue current job with salary increase and/or promotion	0.0
Other (please specify)	19.0

n=21

Responses from "Other" choice:

Begin AAS (1)
Return to current employer (1)
School in different field (1)
Wasted my time (1)

Table 31.
I would recommend this program to others.

Response	Percentage
Yes	95.2
No	4.8

n=21

Table 32.
Why would you not recommend the program to others?

Responses Provided	Percentage
Because you can’t get a job with just a certificate	100.0

n=1

Appendix D:

Student Exit Survey Report:
November 2014 to April 2015

METHODOLOGY

A completion survey to assess students' experiences in I-AM signature programs was developed and distributed to students that had completed their program of study at each of the 15 participating community colleges. The surveys were distributed via electronic link by Project Leads and Advisors/Career Navigators starting in August, 2014 and will continue to be distributed through May, 2016. A total of 165 students responded to the survey between October 24, 2014 and April 30, 2015.

Table 1.
Which community college do you attend?

Community College	Number of Students Responding
Des Moines Area Community College	19
Eastern Iowa Community Colleges	1
Hawkeye Community College	15
Iowa Central Community College	9
Indian Hills Community College	9
Iowa Lakes Community College	3
Iowa Valley Community College District	6
Iowa Western Community College	21
Kirkwood Community College	3
North Iowa Area Community College	54
Northeast Iowa Community College	14
Northwest Iowa Community College	0
Southeastern Community College	0
Southwestern Community College	1
Western Iowa Tech Community College	10

n=165

Students that responded to the survey represented 13 of the 15 community colleges (see Table 1). The majority (62.1%) of the students responding indicated that they had completed a Welding program, 23.6% had completed a Machining/CNC/Tool and Die program, and 1.2% had completed an Industrial Maintenance program (see Table 2). Students were asked why they had chosen their major/program of study. Students enrolled in the program indicated that they chose the program because they were interested in this field of study and want to work in this field of study (see Table 3). Other students indicated they were interested in strengthening their

skills or were enrolled because of the opportunity it provided in getting a better job with a different employer (see Table 3.

Table 2.
What is your major/program of study? (Select one)

Signature Program	Percentage
Industrial Automation	0.0
Industrial Maintenance	1.2
Machining/CNC/Tool & Die	23.6
Manufacturing Technician/Technology	10.6
Robotics	0.0
Transportation & Logistics	0.0
Welding Technician/Technology	62.1
Other (Please specify):	2.5

n=161
Responses from the "Other" choice: EPA Green Training (3)

Table 3.
Why did you choose your major/program of study? (Select all that apply)

Response	Percentage
I am interested in my field of study	52.8
I want to work in my field of study	54.0
I want to strengthen my skills in my field of study	34.2
I need it in order to get an increase in wages or get promoted at my current job	11.8
The degree will allow me to get a better job with a different employer	28.6
Other (please specify):	11.2

Note: The percentages do not add up to 100%.
n=161
Responses from the "Other" choice: Employer (7)
Personal development/new skill (5)
Hobby (3)
Art work (1)

Students were asked several questions about their reasons for enrolling at their community college, their original educational and career goals, how they heard about the program at their community college, whether they were familiar with Elevate Iowa, and about whether they had completed a certificate program.

Students were asked about their experiences with success coaches/pathway navigators/career coaches at their respective college (e.g., whether they met with an advisor, how often they met with an advisor) and about their opinions with regards to resources such as tutoring, advising, workshops, KeyTrain/Career Ready 101, and Credit for Prior Learning. Students were asked about their level of engagement/involvement in courses and various activities at their community college, to rate their attendance and to give reasons why they missed class. Students were then asked to indicate what things (e.g., equipment, computer) they needed in order to learn and to indicate whether they had access to everything they needed. In addition, they were asked whether they participated in events held at their community colleges such as career fairs, tours of local industry, and mock interviews with local employers.

Finally, students were asked about third party certifications and about their plans now that they completed their program. Students were asked whether they plan to continue their education, what their career plans are, and whether they would recommend their signature program to others.

Implementation Analysis Research Question

Students' responses to the completion survey partially answer two of the following TAACCCT grant required research questions:

- How were programs and program design improved or expanded using grant funds?
- Did the grantees conduct an in-depth assessment of participants' abilities, skills, and interests to select participants into the grant program?

In particular, responses provide information about students' experiences with advisors, registration, and tutoring services funded by grant funds. Responses also reflect students' perceptions about the availability and helpfulness of various resources available through their respective community colleges and success coaches/pathway navigators/career coaches. Students were also asked regarding their experiences with various career preparation tools and resources provided by their community colleges.

RESULTS

Enrollment, Educational and Career Goals. Students were asked why they enrolled in their respective community college and program of study. Most of the students (62.3%) reported that they enrolled at their community college because it was close to home, 40.9% enrolled because they could save money, and 32.1% reported that they enrolled because their community college has a close relationship with industry. Others indicated that they had taken classes at their community college in the past (20.1%) and that they were interested in the cutting edge technology (15.1%; see Table 4). Students heard about their program in a variety of ways, including friends (29.6%), school counselor or advisor (27.7%), or family members (16.4%; see Table 5).

Students were asked whether they had heard about the Elevate Iowa Campaign (see Table 6). Slightly less than half (41.5%) of the students have heard of the Elevate Iowa campaign, a statewide marketing campaign funded by the I-AM project. Of these students, the majority (84.8%) had heard about the Elevate Iowa campaign from staff at their respective community college, 10.6% heard about it on the radio, and 7.6% heard it about it through Iowa Workforce Development (see Table 7).

When students were asked what their original educational goal was when enrolling into their program (see Table 8), almost half (47.8%) of the students stated that their goal was to complete a certificate program at their community college, 20.8% indicated that their original goal was to earn a diploma. Students that indicated their goal was to complete the certificate program were asked whether the certificate was credit or non-credit (see Table 9). The majority (60%) of these students reported that the certificate they were completing was a non-credit certificate.

When asked about their original career goal, almost half (43.4%) of the students reported that they wanted to get a job in their field of study and almost 20% reported that they wanted to get a job in general. The remainder of students indicated that they wanted to keep their current job (6.3%), get a promotion and/or increase in salary/wages (5.7%), or want to get a better job with a different employer (11.3%; see Table 10).

Advising, Registration, and Tutoring. Students were also asked about their experiences and perceptions about their Success Coach/Pathway Navigator/Career Coach. Almost 80% of students indicated that they had met with someone in an advisor role at their community college (see Table 11). Slightly more than half (53.4%) reported that they met with their advisor at least once per semester or monthly, 14.3% met with their advisor once every other week, 12.7% met with an advisor weekly, and 15.1% met with an advisor more than one time per week (see Table 12). Overall, the majority (80.9% to 94.5%) of students agreed that their advisors were friendly, helpful, knowledgeable about program requirements and transferring to another college, available/accessible, and helpful in setting goals (see Table 13).

In general, students reported that their advisors provided the following resources: tutoring, financial aid services/counseling, advising, resume writing, and workshops (see Table 14). A

majority (71.4%) of the responding students used advising, 61.9% used financial aid services/counseling, and 52.4% used resume writing. Slightly less than half (45.2%) of the responding students reported that they used workshops and over one-third (34.1%) reported using tutoring services (see Table 14). Overall, students found the resources listed above to be helpful (see Table 14).

KeyTrain/Career Ready 101. Students were about their use of KeyTrain/Career Ready 101 (i.e., online preparation resources; see Table 15). Only one-third (34.0%) of the students reported that they used KeyTrain/Career Ready 101 at their community college. Among students that did use KeyTrain/Career Ready 101, 90.9% of students found it useful (see Table 16). A couple of students indicated that it was not useful because they did not learn anything and it was not used in order to get a job in their field (see Table 17). Among students that indicated it was helpful, it was used for math remediation, improvement in the National Career Readiness Certificate (NCRC) score, and resume writing (see Table 18). Among students that reported that they did not use Key Train/Career Ready 101, 30.5% reported that it was not offered to them and 24.4% did not see the value in it (see Table 19). The remaining students indicated various reasons for not using it such as not knowing about it, not having time, or had already taken the NCRC (see Table 19).

Only one-third (31.6%) of the students reported that someone (e.g., advisor, career navigator, success coach) discussed credit for prior learning with them (see Table 20). Students that indicated that they had discussed credit for prior learning were asked whether they sought out credit for prior learning. The majority (58.0%) of these students did not, 24% reported that they did and were able to earn credit as a result of going through the process and 18% reported that they did had sought credit for prior learning but were unable to earn credit as a result (see Table 21)

Student Engagement. Students were asked to rate their level of class attendance (see Table 22). Overall, the majority (78.5%) of the students reported that they either never missed a class or were rarely absent from class, 19.6% reported some absences and 1.9% reported excessive absences (see Table 22). The most common reasons for missing class included: illness, issues with child care, or other obligations such as medical issues, needing to work, or transportation issues (see Table 23).

Students were asked whether they perceived any gaps in being able to learn due to not having access to things they need to do so (see Table 24). The majority (94.3%) of students felt that they did have access to everything they needed in order to learn. Among students that indicated they do not have all that they needed, they indicated that they needed equipment or better equipment, computers, transportation and access to the internet (see Table 25).

Students were also asked whether they participated in job fair type events organized by their community college (see Table 26). The majority (64.9%) of the students responding participated in industry tours, 46.3% participated in the career fairs, 35.6% participated in mock interviews

with employers, and 32.9% took advantage of having an employer look over their resume (see Table 26).

Future Career and Educational Plans. Students were asked to identify all of the third party certifications they took as students (see Table 27). Almost half (46.7%) of the students took the NCRC as their third party certification, 22.4% took the American Welding Society (AWS) certification, 15.1% took the Manufacturing Skills Standards Council Certified Production Technician (MSSC CPT) certification, and 6.6% took the National Institute for Metalworking Skills (NIMS) certification. Students were asked why they had chosen to take the third party certification (see. Table 28). Approximately 61.8% of the students who took the third party certifications reported that it was a requirement of their program, 36.4% reported that they thought it would help them get a job, and 36.4% reported that they took it for personal satisfaction (see Table 29). Several students reported that they did not take the third party certification because they did not know it was available, while others reported that it was not needed, or they were not ready to take it (see Table 29).

Students were asked whether they planned to continue their education now that they have completed the program. A majority (74.3%) of the students reported that they plan to continue their education; 40.1% plan to continue their education right away and about one-third (34.2%) indicated that they will take a break before returning to continue their education. The remaining 25.7% indicated that they do not have plans to continue their education.

Students were also asked about their career plans now that they have completed the program. About half (55.3%) reported that they will seek employment, 13.8% will begin a new job that they have already secured, and 10.5% reported that they will continue in their current job along with a salary increase and/or promotion (see Table 31).

Students were asked whether they would recommend their program to others. All of the students responded that they would recommend their program of study to others.

The following section describes results from the Student Completion survey: Enrollment/Goals, Advising/Registration and Tutoring, Engagement, and Career Questions.

ENROLLMENT/GOALS

The following section describes student responses indicating decisions for enrolling at a particular community college/choosing a particular major/program, awareness of the Elevate Iowa campaign, and students' educational and career goals.

Table 4.
Why did you enroll at your community college? (Select all that apply)

Response	Percentage
Close to home	62.3
Cost savings	40.9
Cutting edge technology	15.1
Challenging classes	8.8
I've taken classes at the community college in the past	20.1
Easy to transfer to another community college	4.4
My community college has a close relationship with business and industry	32.1
Other	9.4

Note: The percentages do not add up to 100%.
n=159
Responses from the "Other" choice: Good Program (5)
Better job (3)
Class was paid for (1)
Instructor is patient (1)
Offered course not offered elsewhere (1)
Recommended (1)
Student is broke (1)

Table 5.
How did you hear about your major/program of study? (Select all that apply)

Marketing Mediums	Percentage
Television	4.4
Radio	7.5
Social media (e.g., Facebook, Twitter, YouTube)	5.0
School counselor or advisor	27.7
I have previously taken classes at this community college	11.3
Employer/work	10.7
I heard about it from a friend	29.6
I heard about it from a family member	16.4
Flyer	3.8
Workforce Development	11.9
Other (please specify)	15.7

Note: The percentages do not add up to 100%.
n=159
Responses from the "Other" choice:
Internet (6)
Billboard (2)
Employer (2)
High School (2)
Job Fair (2)
Calling (1)
Continuing Education office (1)
Course catalog (1)
Director (1)
Evelyn Davis Center (1)
HiSET course (1)
IACC pathway (1)
Newspaper (1)
Well known (1)
Women's Center for Advancement (1)

Table 6.
Have you heard about the Elevate Iowa campaign? (Select one)

Response	Percentage
Yes	41.5
No	58.5

n=159

Table 7.
How did you hear about the Elevate Iowa campaign? (Select all that apply)

Marketing Mediums	Percentage
Radio	10.6
Facebook	3.0
Flyer/handout	6.1
Website – Elevateiowa.com	4.5
Event	4.5
From a friend or family member	4.5
From work, employer, or colleague	6.1
At my community college/from community college staff	84.8
Workforce Development	7.6
Other (please specify)	7.6

Note: The percentages do not add up to 100%.
n=66
Responses from the "Other" choice: None listed

Table 8.
What was your original <u>educational</u> goal when you enrolled? (Please select the one that best describes your goal)

Educational Goal	Percentage
Take a few classes	6.9
Complete a Certificate Program	47.8
Complete a Diploma	20.8
Complete an AA/AS degree	18.2
Transfer to a 4 year college	2.5
Other	3.7

n=159
Responses from the "Other" choice: Change of career/new skills (3)
To see if possible (1)

Table 9.
You indicated that your original goal was to complete a certificate. Was the certificate for credit or non-credit?

Certificate Options	Percentage
Credit Certificate	32.9
Non-Credit Certificate	59.2
I don't know	7.9

n=76

Table 10.
What was your original career goal when you enrolled? (Please select the one that best describes your goal)

Career Goal	Percentage
Get a job	19.5
Get a job in my field	43.4
Keep my current job	6.3
Get a promotion and/or increase my salary/wages at my current job	5.7
Get a better job with different employer within the same field as my current job	11.3
Other	13.8

n=159

Responses from the "Other" choice:

Learn something new (9)
Get a better job (4)
Make enough money (2)
Welding (2)
Become self-employed business owner (1)
Gain experience (1)
Second income (1)

ADVISING/REGISTRATION AND TUTORING

The following section describes students' experiences and perceptions about their Success Coach/Pathway Navigator/Career Counselor, use of KeyTrain/Career Ready 101 training programs and students' awareness and use of Credit for Prior Learning opportunities at their respective community college.

Table 11.
Have you met with someone at your community college who helps you do things like schedule classes, figure out other resources on campus, look for jobs, or just check on you? These people go by titles like Success Coach, Pathway Navigator, and Career Counselor. (Select one)

Responses	Percentage
Yes	79.2
No	20.8

n=159

Table 12.
How often do you meet with your Success Coach/Pathway Navigator/Career Counselor? (Select one)

Meeting Times	Percentage
Once per semester	23.0
Monthly	29.4
Once every other week	14.3
Once per week	12.7
More than once per week	15.1
I have not met with a Success Coach/Pathway Navigator/ Career Counselor in the past year	5.5

n=126

Table 13.
My Success Coach/Pathway Navigator/Career Counselor…

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Total Agree
is friendly	126	2.4	0.0	3.2	15.9	78.6	94.5
is helpful	126	2.4	0.8	3.2	17.5	76.2	93.7
is knowledgeable about program requirements	126	2.4	0.8	4.0	22.2	70.6	92.8
is knowledgeable about requirements for transferring to another college	126	1.6	0.0	17.5	21.4	59.5	80.9
is available and/or accessible	126	1.6	0.8	4.8	25.4	67.4	92.8
helped me set goals	126	4.0	0.0	11.1	21.4	63.5	84.9

Note: Values reflect percentages.

Table 14.
In the following section, we are interested in whether your received any of the resources listed below from your Success Coach/Pathway Navigator/Career Counselor or someone at your community college and the extent with which you thought these resources were helpful.

		Did you receive any of the resources listed on the left from the Success Coach/ Pathway Navigator/Career Counselor?		*Please rate the level of helpfulness of the resources provided by the Success Coach/Pathway Navigator/Career Counselor*			
Resources	*n*	Yes	No	Not at all Helpful	Slight Helpful	Fairly Helpful	Very Helpful
Tutoring	126	34.1	65.9	2.3	9.3	9.3	79.1
Financial Aid Services/Counseling	126	61.9	38.1	3.8	7.7	7.7	80.8
Advising	126	71.4	28.6	3.3	5.6	8.9	82.2
Resume writing	126	52.4	47.6	4.5	3.0	10.6	81.8
Workshops	126	45.2	54.8	7.0	3.5	7.0	82..5

Note: Values reflect percentages.

Table 15.
Did you use KeyTrain/Career Ready 101 at your college? KeyTrain and Career Ready 101 are online resources that help student prepare to take the NCRC, and other resources like math tutoring and learning about personal finance.

Response	Percentage
Yes	34.9
No	65.1

n=126

Table 16.
Did you find KeyTrain/Career Ready 101 useful?

Response	Percentage
Yes	90.9
No	9.1

n=44

Table 17.
Tell us why you didn't find KeyTrain/Career Ready 101 useful.

Responses	Percentage
Did not learn	50.0
Did not use it to get a job in field	50.0

n=2

Table 18.
What components of KeyTrain/Career Ready 101 did you use?

KeyTrain Components	Percentage
Math remediation	36.4
To improve my NCRC score	59.1
Resume writing	29.5
Financial literacy	13.6
Other (please specify)	11.4

Note: The percentages do not add up to 100%.
n=44
Responses from the "Other" choice: I don't know (1)
Practice for NCRC (1)

Table 19.
Why didn't you use KeyTrain/Career Ready 101?

Response	Percentage
Not offered	30.5
Did not see the value	24.4
Other (please specify)	45.1

n=82

Responses from the "Other" choice:

Did not know about it (11)
Did not have the time (7)
Already took NCRC (4)
Did not take NCRC (4)
Did not need it (3)
Does not apply (2)
Cannot recall (1)
Did not get that far (1)
Mature student with different needs (1)

Table 20.
Did anyone (e.g., Advisor, Career Navigator, Success Coach, Pathway Navigator, Career Counselor, Instructor) at your college talk to you about "Credit for Prior Learning?" Credit for Prior Learning is sometimes called "experience credit" or "alternative credit". Students earn college credit for what they already know or have learned someplace else. (Select one)

Response	Percentage
Yes	31.6
No	68.4

n=158

Table 21.
Did you seek college credit for your prior experiences or knowledge gained outside of your college?

Credit for Prior Learning	Percentage
Yes, I did earn credit through the process	24.0
Yes, but I did not earn credit through the process	18.0
No	58.0

n=50

ENGAGEMENT

The following section describes students' engagement, for example, class attendance, reasons for missing class, perceived gaps in having what is needed to learn, and their involvement with community college organized events.

Table 22.
In general, how would you rate your class attendance? (Select one)

Absences	Percentage
Excessive absences	1.9
Some absences	19.6
Rarely absent	45.6
Never miss class	32.9

n=158

Table 23.
If you miss class, what are the main reasons for missing class? (Select all that apply)

Reasons for Missing Class	Percentage
Illness	38.0
Child care issues	8.9
Transportation issues	15.8
Need to work/can't get time off	14.6
Other (e.g., medical, death, weather)	17.7

Note: The percentages do not add up to 100%.
n=158

Table 24.
Did you have access to everything you need in order to learn?

Response	Percentage
Yes	94.3
No	5.7

n=158

Table 25.
What did you need in order to learn?

Responses Provided	Percentage
Equipment/Better equipment	37.5
Better instructor	12.5
Bigger blueprints	12.5
Computer	12.5
Silence	12.5
Transportation and access to internet	12.5

n=8

Table 26.
Did you participate in any of the following events organized by your community college?

Events	*n*	Yes	No
Career fair	149	46.3	53.7
Tour of industry	148	64.9	35.1
Employer looked over my resume	146	32.9	67.1
Mock interviews with employers	146	35.6	64.4
Other (please specify)	69	11.6	88.4

Note: Values reflect percentages.
Responses from the "Other" choice: Live interview (1)
Optimal Resume (1)
Various activities (1)

CAREER AND EDUCATIONAL PLANS

The following section describes results of percentage of students taking third party certification, students' future educational and career plans and whether students would recommend this program to others.

Table 27.
Which third party certification did you take? (Select all that apply)

Certifications	Percentage
AWS (American Welding Society)	22.4
NIMS (National Institute for Metalworking Skills)	6.6
MSSC CPT (Manufacturing Skills Standards Council Certified Production Technician)	15.1
MSSC CLT (Manufacturing Skills Standards Council Certified Logistics Technician)	0.7
APICS CPIM (American Production and Inventory Control Society Certified in Production and Inventory Management)	0.0
APICS CSCP (American Production and Inventory Control Society Certified Supply Chain Professional)	0.0
SME (Society of Manufacturing Engineers)	0.0
NCRC (National Career Readiness Certificate)	46.7
Did not take any certifications	27.6

Note: The percentages do not add up to 100%.
n=152

Table 28.
Why did you choose to take the third party certification? (Select all that apply)

Responses	Percentage
Helped me get a job	36.4
Was a requirement of my program	61.8
Helped me advance in my job	16.4
Personal satisfaction	36.4
Other (please specify)	5.5

Note: The percentages do not add up to 100%.
n=110
Responses from "Other" choice: Complete program (1)
Confidence builder (1)
Increase knowledge (1)
Life changing event (1)
Prepare for better job (1)

Table 29.
Why did you choose not to take the third party certification? (Select all that apply)

Reasons for No Third Party Certification	Percentage
Too costly	2.4
I did not see the value	2.4
Too challenging	0.0
Other (please specify)	31.0
Did not know it was available	64.2

n=42
Responses from "Other" choice: Not available (2)
Not needed (2)
Other things to do (2)
Too young (2)
Was not ready (2)
Companies will pay (1)
Said we would get certified, but did not happen (1)

Table 30.
Now that you have completed the program do you plan to continue your education?

Education Plans	Percentage
Yes, I plan to continue my education now	40.1
Yes, but I will take a break for now and return sometime in the future	34.2
No, I don't plan to continue my education	25.7

n=152

Table 31.
What are your career plans now that you have completed the program? (Select the one that best describes your plans)

Career Plans	Percentage
Seek internship	1.3
Begin internship secured before completion of program	1.3
Seek employment	55.3
Begin new job (have already secured a position)	13.8
Begin new position with current employer	3.9
Continue current job with salary increase and/or promotion	10.5
Other (please specify)	13.8

n=152

Responses from "Other" choice:

Continue education (10)
Self-employment (3)
Keep working (3)
Military (1)
Pay for children's education (1)
Several choices (1)

Table 32.
I would recommend this program to others.

Response	Percentage
Yes	100.0
No	0.0

n=152

Appendix E:

Student Exit Survey Report:
May 2015 to May 2016

METHODOLOGY

A completion survey to access students' experiences in I-AM signature programs was developed and distributed to students that had completed their program of study at each of the 15 participating community colleges. The surveys were distributed via electronic link by Project Leads and Advisors/Career Navigators starting in August, 2014 and continued to be distributed through May, 2016. A total of 249 students responded to the survey between May 1, 2015 and May 31, 2016.

Table 1.
Which community college do you attend?

Community College	Number of Respondents
Des Moines Area Community College	37
Eastern Iowa Community Colleges	1
Hawkeye Community College	24
Iowa Central Community College	17
Indian Hills Community College	20
Iowa Lakes Community College	40
Iowa Valley Community College District	24
Iowa Western Community College	13
Kirkwood Community College	0
North Iowa Area Community College	31
Northeast Iowa Community College	16
Northwest Iowa Community College	2
Southeastern Community College	15
Southwestern Community College	6
Western Iowa Tech Community College	3

n=249

Students that responded to the survey represented 14 of the 15 community colleges (see Table 1). The majority (58.9%) of the students responding indicated that had completed a Welding program, 26.6% had completed a Machining/CNC/Tool and Die program, 4.8% had completed an Industrial Maintenance program, 4.4% completed a Manufacturing Technician/Technology program, and 2.4% completed a Robotics programs (see Table 2). Students were asked why they had chosen their major/program of study. Students enrolled in the program indicated that they

chose the program because they were interested in this field of study or want to work in this field of study (see Table 3). Other students indicated they were interested in strengthening their skills or were enrolled because of the opportunity it provided in getting a better job with a different employer (see Table 3).

Table 2.
What is your major/program of study? (Select one)

Signature Program	Percentage
Industrial Automation	0.0
Industrial Maintenance	4.8
Machining/CNC/Tool & Die	26.6
Manufacturing Technician/Technology	4.4
Robotics	2.4
Transportation & Logistics	0.4
Welding Technician/Technology	58.9
Other (Please specify):	2.4

n=248
Responses from the "Other" choice: Collision Repair and Refinishing (1)
Wind Energy (1)

Table 3.
Why did you choose your major/program of study? (Select all that apply)

Response	Percentage
I am interested in my field of study	53.2
I want to work in my field of study	47.6
I want to strengthen my skills in my field of study	27.0
I need it in order to get an increase in wages or get promoted at my current job	12.5
The degree will allow me to get a better job with a different employer	30.6
Other (please specify):	4.8

Note: The percentages do not add up to 100%.
n=248
Responses from the "Other" choice: Already in apprenticeship (1)
Dislocated worker (1)
To build my skill set (1)

Students were asked several questions about their reasons for enrolling at their community college, their original educational and career goals, how they heard about the program at their community college, whether they were familiar with Elevate Iowa, and about whether they had completed a certificate program.

Students were asked about their experiences with success coaches/pathway navigators/career coaches at their respective college (e.g., whether they met with an advisor, how often they met with an advisor) and about their opinions with regards to resources such as tutoring, advising, workshops, KeyTrain/Career Ready 101, and Credit for Prior Learning. Students were asked about their level of engagement/involvement in courses and various activities at their community college, to rate their attendance and to give reasons why they missed class. Students were then asked to indicate what things (e.g., equipment, computer) they needed to learn and to indicate whether they had access to everything they needed. In addition, they were asked whether they participated in events held at their community colleges such as career fairs, tours of local industry, and mock interviews with local employers.

Finally, students were asked about third party certifications and about their plans now that they completed their programs. Students were asked whether they plan to continue their education, what their career plans are, and whether they would recommend their signature program to others.

Implementation Analysis Research Questions

Students' responses to the completion survey partially answer two of the following TAACCCT grant required research questions:

- How were programs and program design improved or expanded using grant funds?
- Did the grantees conduct an in-depth assessment of participants' abilities, skills, and interests to select participants into the grant program?

In particular, responses provide information about students' experiences with advisors, registration, and tutoring services funded by grant funds. Responses also reflect students' perceptions about the availability and helpfulness of various resources available through their respective community colleges and success coaches/pathway navigators/career coaches. Students were also asked regarding their experiences with various career preparation tools and resources provided by their community colleges.

RESULTS

Enrollment, Educational and Career Goals. Students were asked why they enrolled in their respective community college and program of study (see Table 4). Most of the students (63.7%) reported that they enrolled at their community college because it was close to home, 41.1% enrolled because they could save money, and 26.6% reported that they enrolled because their community college has a close relationship with industry. Others indicated that they had taken classes at their community college in the past (19.0%) and that they were interested in the cutting edge technology (13.3%; see Table 4). Students heard about their program in a variety of ways, including friends (27.4%), school counselor or advisor (28.2%), family members (18.1%), and Iowa Workforce Development (13.7%; see Table 5).

Students were asked whether they had heard about the Elevate Iowa Campaign (see Table 6). One-fourth (25.0%) of the students have heard of the Elevate Iowa campaign, a statewide marketing campaign funded by the I-AM project. Of these students, the majority (69.4%) had heard about the Elevate Iowa campaign from staff at their respective community college, 12.9% heard about it on the radio, and 12.9% learned about it from an event (see Table 7).

When students were asked what their original educational goal was when enrolling into the program (see Table 8), approximately one-third (36.7%) of the students stated that their goal was to complete a certificate program at their community college, 20.8% indicated that their original goal was to earn a diploma, and 27.0% indicated that that their original goal was to complete an AA/AS degree. Students that indicated their goal was to complete the certificate program were asked whether the certificate was credit or non-credit (see Table 9). Less than half (44.0%) of these students reported that the certificate they were completing was a non-credit certificate.

When asked about their original career goal, almost half (46.7%) of the students reported that they wanted to get a job in their field of study and almost 24.4% reported that they wanted to get a job in general. The remainder of students indicated that they wanted to keep their current job (3.3%), get a promotion and/or increase in salary/wages (8.5%), or want to get a better job with a different employer (8.1%; see Table 10).

Advising, Registration, and Tutoring. Students were also asked about their experiences and perceptions about their Success Coach/Pathway Navigator/Career Coach (see Table 11). Almost 70% of completers indicated that they had met with someone in an advisor role at their community college. Slightly more than half (61.1%) reported that they met with their advisor at least every month or every semester, and 9.9% met with their advisor once every other week, 14.0% met with an advisor weekly, and 7.0% met with an advisor more than one time per week (see Table 12). Overall, the majority (78.4 to 86.5%) of completers agreed that their advisors are friendly, helpful, knowledgeable about program requirements and requirements for transferring to another college, available/accessible, and helpful in setting goals (see Table 13).

In general, students reported that their advisors provided the following resources: tutoring, financial aid services/counseling, advising, resume writing, and workshops (see Table 14). A majority (77.2%) of the responding students used advising, 66.7% used financial aid services/counseling, and 55.6% used resume writing. Slightly less than half (49.1%) of the responding students reported that they used workshops and over one-third (38.0%) reported using tutoring services (see Table 14). Overall, students found the resources listed above to be helpful (see Table 14).

KeyTrain/Career Ready 101. Students were asked about their use of KeyTrain/Career Ready 101 (i.e., online preparation resources; see Table 15). Only one-fourth (25.7%) of the students reported that they used KeyTrain/Career Ready 101 at their community college. Among students that did use KeyTrain/Career Ready 101, 88.6% of students found it useful (see Table 16). A couple of students indicated that it was not useful because it was not in the correct format needed for studying or that it wasn't useful overall (see Table 17). Among students that indicated it was helpful, it was used for math remediation, improvement in the National Career Readiness Certificate (NCRC) score, and resume writing (see Table 18). Among students that reported that they did not use Key Train/Career Ready 101, 51.6% reported that it was not offered to them and 28.6% did not see the value in it (see Table 19). The remaining students indicated various reasons for not using it such as not knowing about it, not having time, or had already taken the NCRC (see Table 19).

Less than one-fourth (23.8%) of the students reported that someone (e.g., advisor, career navigator, success coach) discussed Credit for Prior Learning with them (see Table 20). Students that indicated that they had discussed Credit for Prior Learning were asked whether they sought out Credit for Prior Learning. Less than half (48.3%)of these students did not, 32.8% reported that they did and were able to earn credit as a result of going through the process and 19.0% reported that they did had sought Credit for Prior Learning but were unable to earn credit as a result (see Table 21)

Student Engagement. Students were asked to rate their level of class attendance (see Table 22). Overall, the majority (76.6%) of the students reported that they either never missed a class or were rarely absent from class, 20.1% reported some absences and 3.3% reported excessive absences (see Table 22). The most common reasons for missing class included: illness, issues with child care, or other obligations such as medical issues, needing to work, or transportation issues (see Table 23).

Students were asked whether they perceived any gaps in being able to learn due to not having access to things they need to do so (see Table 24). The majority (94.7%) of students felt that they did have access to everything they needed in order to learn. Among students that indicated they do not have all that they needed, they indicated that they needed more/better teachers, have a hands on environment, more classes, and need own welding helmet (see Table 25).

Students were also asked whether they participated in job fair type events organized by their community college (see Table 26). Over half (55.4%) of the students responding participated in

industry tours. 51.1% participated in the career fairs, 35.2% took advantage of having an employer look over their resume, and 26.5% participated in mock interviews with employers, (see Table 26).

Future Career and Educational Plans. Students were asked to identify all of the third party certifications they took as students (see Table 27). About one-third (36.5%) of the students took the NCRC as their third party certification, 37.9% took the American Welding Society (AWS) certification, 10.0% took the Manufacturing Skills Standards Council Certified Production Technician (MSSC CPT) certification, 7.8% took the National Institute for Metalworking Skills (NIMS) certification, and 1.4% took the American Production and Inventory Control Society Certified in Production and Inventory Management (APICS CPIM; see. Table 28). Approximately 45.9% of the students who took the third party certifications reported that it was a requirement of their program, 42.1% reported that they took it for personal satisfaction, 41.5% reported that they thought it would help them get a job, and 16.4% reported that they thought it would help them advance in their careers (see Table 29). Over half (55.0%) of the students that did not apply for a third party certification indicated that they did not know it was available, 18.3% indicated that they did not see the value, and the remainder provided various reasons such as taking it later, have already done so, etc. (see Table 29).

Students were asked whether they planned to continue their education now that they have completed the program. A majority (68.5%) of the students reported that they plan to continue their education; 37.0% plan to continue their education right away and about one-third (31.5%) indicated that they will take a break before returning to continue their education. The remaining 31.5% indicated that they do not have plans to continue their education.

Students were also asked about their career plans now that they have completed the program. Approximately 43.8% reported that they will seek employment, 15.5% will begin a new job that they have already secured, and 15.1% reported that they will continue in their current job along with a salary increase and/or promotion (see Table 31).

Students were asked whether they would recommend their program to others. The majority (97.3%) of the students responded that they would recommend their program of study to others.

The following section describes results from the Student Completion survey: Enrollment/Goals, Advising/Registration and Tutoring, Engagement, and Career Questions.

ENROLLMENT/GOALS

The following section describes students' reasons for enrolling at their respective community college, how they heard about the community college, choosing a particular major/program, whether they are familiar with the Elevate Iowa campaign and to indicate their educational and career goals.

Table 4.
Why did you enroll at your community college? (Select all that apply)

Response	Percentage
Close to home	63.7
Cost savings	41.1
Cutting edge technology	13.3
Challenging classes	6.9
I've taken classes at the community college in the past	19.0
Easy to transfer to another community college	6.5
My community college has a close relationship with business and industry	26.6
Other	8.9

Note: The percentages do not add up to 100%.
n=248
Responses from the "Other" choice: Employer (1)
Instructors (1)
Lost my job (1)
WIA (1)

Table 5.
How did you hear about your major/program of study? (Select all that apply)

Marketing Mediums	Percentage
Television	4.8
Radio	8.9
Social media (e.g., Facebook, Twitter, YouTube)	5.2
School counselor or advisor	28.2
I have previously taken classes at this community college	13.3
Employer/work	14.1
I heard about it from a friend	27.4
I heard about it from a family member	18.1
Flyer	7.7
Workforce Development	13.7
Other (please specify)	10.9

Note: The percentages do not add up to 100%.
n=248
Responses from the "Other" choice: Dislocated worker (1)
Government Job Outlook website (1)
High school tour (1)
Walk in (1)

Table 6.
Have you heard about the Elevate Iowa campaign? (Select one)

Response	Percentage
Yes	25.0
No	75.0

n=248

Table 7.

How did you hear about the Elevate Iowa campaign? (Select all that apply)

Marketing Mediums	Percentage
Radio	12.9
Facebook	6.5
Flyer/handout	6.5
Website – Elevateiowa.com	4.8
Event	12.9
From a friend or family member	6.5
From work, employer, or colleague	1.6
At my community college/from community college staff	69.4
Workforce Development	3.2
Other (please specify)	1.6

Note: The percentages do not add up to 100%.
n=62
Responses from the "Other" choice: Manufacturing Day (1)

Table 8.

What was your original <u>educational</u> goal when you enrolled? (Please select the one that best describes your goal)

Educational Goal	Percentage
Take a few classes	4.4
Complete a Certificate Program	36.7
Complete a Diploma	27.4
Complete an AA/AS degree	27.0
Transfer to a 4 year college	2.8
Other	1.6

n=248
Responses from the "Other" choice: Weld for personal use (2)
Earn my journeyman card (1)
GED (1)

Table 9.

You indicated that your original goal was to complete a certificate. Was the certificate for credit or non-credit?

Certificate Options	Percentage
Credit Certificate	29.7
Non-Credit Certificate	44.0
I don't know	26.4

n=91

Table 10.

What was your original career goal when you enrolled? (Please select the one that best describes your goal)

Career Goal	Percentage
Get a job	24.4
Get a job in my field	46.7
Keep my current job	3.3
Get a promotion and/or increase my salary/wages at my current job	8.5
Get a better job with different employer within the same field as my current job	8.1
Other	8.9

n=246

Responses from the "Other" choice:

Better job opportunity (4)
Career change (2)
Weld for personal use (2)
CPIM certification (1)
Increase knowledge (1)
Learn a trade (1)
Own business (1)
Retraining (1)
Transfer (1)

ADVISING/REGISTRATION AND TUTORING

The following section describes students' perceptions of their Success Coach/Pathway Navigator/Career Counselor, how often they meet with them, their perceptions of the KeyTrain/Career Ready 101 training programs, and whether they were aware of Credit for Prior Learning.

Table 11.

Have you met with someone at your community college who helps you do things like schedule classes, figure out other resources on campus, look for jobs, or just check on you? These people go by titles like Success Coach, Pathway Navigator, and Career Counselor. (Select one)

Responses	Percentage
Yes	69.9
No	30.1

n=246

Table 12.

How often do you meet with your Success Coach/Pathway Navigator/Career Counselor? (Select one)

Meeting Times	Percentage
Once per semester	29.7
Monthly	31.4
Once every other week	9.9
Once per week	14.0
More than once per week	7.0
I have not met with a Success Coach/Pathway Navigator/Career Counselor in the past year	8.1

n=172

Please indicate the extent with which you agree with the following statements.

Table 13.
My Success Coach/Pathway Navigator/Career Counselor…

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Total Agree
is friendly	171	7.0	1.2	5.8	24.0	62.0	86.0
is helpful	171	7.0	0.6	5.8	26.9	59.6	86.5
is knowledgeable about program requirements	171	7.0	1.2	8.8	26.3	56.7	83.0
is knowledgeable about requirements for transferring to another college	171	5.8	1.2	19.9	24.6	48.5	73.1
is available and/or accessible	171	6.4	2.3	6.4	29.2	55.6	84.8
helped me set goals	171	5.3	1.8	14.6	28.1	50.3	78.4

Note: Values reflect percentages.

Table 14.

In the following section, we are interested in whether your received any of the resources listed below from your Success Coach/Pathway Navigator/Career Counselor or someone at your community college and the extent with which you thought these resources were helpful.

		Did you receive any of the resources listed on the left from the *Success Coach/ Pathway Navigator/Career Counselor?*		Please rate the level of helpfulness of the resources provided by the *Success Coach/Pathway Navigator/Career Counselor*			
Resources	*n*	Yes	No	Not at all Helpful	Slight Helpful	Fairly Helpful	Very Helpful
Tutoring	171	38.0	62.0	10.1	3.8	21.5	64.6
Financial Aid Services/Counseling	171	66.7	33.3	3.3	6.6	15.6	74.6
Advising	171	77.2	22.8	4.3	2.2	15.2	78.3
Resume writing	171	55.6	44.4	3.9	2.9	19.6	73.5
Workshops	171	49.1	50.9	7.3	5.4	16.1	71.0

Note: Values reflect percentages.

Table 15.
Did you use KeyTrain/Career Ready 101 at your college? KeyTrain and Career Ready 101 are online resources that help student prepare to take the NCRC, and other resources like math tutoring and learning about personal finance.

Response	Percentage
Yes	25.7
No	74.3

n=171

Table 16.
Did you find KeyTrain/Career Ready 101 useful?

Response	Percentage
Yes	88.6
No	11.4

n=44

Table 17.
Tell us why you didn't find KeyTrain/Career Ready 101 useful.

Responses	Percentage
It wasn't in the correct format for studying	50.0
Not useful	50.0

n=2

Table 18.
What components of KeyTrain/Career Ready 101 did you use?

KeyTrain Components	Percentage
Math remediation	47.7
To improve my NCRC score	40.9
Resume writing	40.9
Financial literacy	20.5
Other (please specify)	9.1

Note: The percentages do not add up to 100%.
n=44
Responses from the "Other" choice: I don't know (1)
Reading (1)

Table 19.
Why didn't you use KeyTrain/Career Ready 101?

Response	Percentage
Not offered	51.6
Did not see the value	28.6
Other (please specify)	19.8

n=126

Responses from the "Other" choice:
Did not know about it (11)
Already done (4)
Couldn't take (1)
Lack of time (1)
Night program (1)
Used Tooling U (1)

Table 20.
Did anyone (e.g., Advisor, Career Navigator, Success Coach, Pathway Navigator, Career Counselor, Instructor) at your college talk to you about "Credit for Prior Learning?" Credit for Prior Learning is sometimes called "experience credit" or "alternative credit". Students earn college credit for what they already know or have learned someplace else. (Select one)

Response	Percentage
Yes	23.8
No	76.2

n=244

Table 21.
Did you seek college credit for your prior experiences or knowledge gained outside of your college?

Credit for Prior Learning	Percentage
Yes, I did earn credit through the process	32.8
Yes, but I did not earn credit through the process	19.0
No	48.3

n=58

ENGAGEMENT

The following section describes students' rating of their class attendance, reasons, if any, for missing class, whether they have all they need to learn, and their participation in community college organized events.

Table 22.
In general, how would you rate your class attendance? (Select one)

Absences	Percentage
Excessive absences	3.3
Some absences	20.1
Rarely absent	43.4
Never miss class	33.2

n=244

Table 23.
If you miss class, what are the main reasons for missing class? (Select all that apply)

Reasons for Missing Class	Percentage
Illness	42.6
Child care issues	9.8
Transportation issues	11.5
Need to work/can't get time off	13.9
Other	17.6
Never miss class	24.6

Note: The percentages do not add up to 100%.
n=244
Responses from the "Other" choice:
Family emergencies (8)
Vacation (7)
Work (4)
Appointment (2)
Funeral (2)
Moving (2)
Sleep (2)
Bad weather (1)
Bus late (1)
Child born (1)
Irresponsibility (1)
Job hunting (1)
Meeting (1)
Physics isn't my thing (1)

Table 24.
Did you have access to everything you need in order to learn?

Response	Percentage
Yes	94.7
No	5.3

n=244

Table 25.
What did you need in order to learn?

Responses	Percentage
More/better teachers	36.4
Hands on environment	18.2
Better class environment	9.1
Listen and learn	9.1
More classes	9.1
Own welding helmet	9.1
Time	9.1

n=11

Table 26.
Did you participate in any of the following events organized by your community college?

Events	*n*	Yes	No
Career fair	227	51.1	48.9
Tour of industry	224	55.4	44.6
Employer looked over my resume	219	35.2	64.8
Mock interviews with employers	219	26.5	73.5
Other (please specify)	105	6.7	93.3

Note: Values reflect percentages.
Responses from the "Other" choice: Field trip (1)
Career readiness (1)

CAREER AND EDUCATIONAL PLANS

The following section describes third party certifications taken by students, why they chose those specific certification, students' future education and career plans, and whether they would recommend program to others.

Table 27.
Which third party certification did you take? (Select all that apply)

Certifications	Percentage
AWS (American Welding Society)	37.9
NIMS (National Institute for Metalworking Skills)	7.8
MSSC CPT (Manufacturing Skills Standards Council Certified Production Technician)	10.0
MSSC CLT (Manufacturing Skills Standards Council Certified Logistics Technician)	0.0
APICS CPIM (American Production and Inventory Control Society Certified in Production and Inventory Management)	1.4
APICS CSCP (American Production and Inventory Control Society Certified Supply Chain Professional)	0.0
SME (Society of Manufacturing Engineers)	0.0
NCRC (National Career Readiness Certificate)	36.5
Did not take any certifications	27.4

Note: The percentages do not add up to 100%.
n=219

Table 28.
Why did you choose to take the third party certification? (Select all that apply)

Responses	Percentage
Helped me get a job	41.5
Was a requirement of my program	45.9
Helped me advance in my job	16.4
Personal satisfaction	42.1
Other (please specify)	2.5

Note: The percentages do not add up to 100%.
n=159
Responses from "Other" choice: Needed skills (2)

Table 29.
Why did you choose not to take the third party certification? (Select all that apply)

Reasons for No Third Party Certification	Percentage
Too costly	10.0
I did not see the value	18.3
Too challenging	0.0
Other (please specify)	16.7
Did not know it was available	55.0

n=60
Responses from "Other" choice: Will do later (4)
Chose not to (2)
Done before (1)
Live elsewhere (1)
Not offered (1)

Table 30.
Now that you have completed the program do you plan to continue your education?

Education Plans	Percentage
Yes, I plan to continue my education now	37.0
Yes, but I will take a break for now and return sometime in the future	31.5
No, I don't plan to continue my education	31.5

n=219

Table 31.
What are your career plans now that you have completed the program? (Select the one that best describes your plans)

Career Plans	Percentage
Seek internship	7.8
Begin internship secured before completion of program	2.3
Seek employment	43.8
Begin new job (have already secured a position)	15.5
Begin new position with current employer	2.7
Continue current job with salary increase and/or promotion	15.1
Other (please specify)	12.8

n=219

Responses from "Other" choice:
Continue education (20)
Own business (1)
Seek new job (1)
Weld for personal use (1)

Table 32.
I would recommend this program to others.

Response	Percentage
Yes	97.3
No	2.7

n=219

Appendix F:

Welding Student Exit Survey Report: August 2014 to May 2016

METHODOLOGY

A completion survey to assess students' experiences in I-AM welding signature programs was developed and distributed to students that had completed their program of study at each of the 15 participating community colleges. The surveys were distributed via electronic link by Project Leads and Advisors/Career Navigators starting in August, 2014 and continued to be distributed through May, 2016. A total of 252 welding students responded to the survey between August 2014 and May 31, 2016.

Table 1.
Which community college do you attend?

Community College	Number
Des Moines Area Community College	54
Eastern Iowa Community Colleges	2
Hawkeye Community College	0
Iowa Central Community College	17
Indian Hills Community College	20
Iowa Lakes Community College	40
Iowa Valley Community College District	17
Iowa Western Community College	3
Kirkwood Community College	0
North Iowa Area Community College	49
Northeast Iowa Community College	18
Northwest Iowa Community College	0
Southeastern Community College	13
Southwestern Community College	5
Western Iowa Tech Community College	14

n=252

Students that responded to the survey represented 12 of the 15 community colleges (see Table 1). All of the students surveyed indicated that their major/program of study was Welding Technician/Technology (see Table 2). Students were asked why they chose their major/program of study. Students enrolled in the program indicated that they chose the program because they were interested in this field of study want to work in this field of study (see Table 3). Other students indicated they were interested in strengthening their skills or were enrolled because of the opportunity it provided in getting a better job with a different employer (see Table 3).

Table 2.
What is your major/program of study? (Select one)

Signature Program	Percentage
Industrial Automation	0.0
Industrial Maintenance	0.0
Machining/CNC/Tool & Die	0.0
Manufacturing Technician/Technology	0.0
Robotics	0.0
Transportation & Logistics	0.0
Welding Technician/Technology	100.0
Other (Please specify):	0.0

n=252

Table 3.
Why did you choose your major/program of study? (Select all that apply)

Response	Percentage
I am interested in my field of study	54.8
I want to work in my field of study	51.6
I want to strengthen my skills in my field of study	32.9
I need it in order to get an increase in wages or get promoted at my current job	8.7
The degree will allow me to get a better job with a different employer	32.5
Other (please specify):	5.6

Note: The percentages do not add up to 100%.
n=252
Responses from the "Other" choice: Add to skills (4), Art work (1), Dislocated worker (1), Hobby (1), Auto body work (3), Automation was full (1), Good career field (1)

Students were asked several questions about their reasons for enrolling at their community college, their original educational and career goals, how they heard about the program at their community college, whether they were familiar with Elevate Iowa, and about whether they had completed a certificate program.

Students were asked about their experiences with success coaches/pathway navigators/career coaches at their respective college (e.g., whether they met with an advisor, how often they met with an advisor) and about their opinions with regards to resources such as tutoring, advising, workshops, KeyTrain/Career Ready 101, and Credit for Prior Learning. Students were asked about their level of engagement/involvement in courses and various activities at their community college, to rate their attendance and to give reasons why they missed class. Students were then asked to indicate what things (e.g., equipment, computer) they needed to learn and to indicate whether they had access to everything they needed. In addition, they were asked whether they participated in events held at their community colleges such as career fairs, tours of local industry, and mock interviews with local employers.

Finally, students were asked about third party certifications and about their plans now that they completed their programs. Students were asked whether they plan to continue their education, what their career plans are, and whether they would recommend their signature program to others.

Implementation Analysis Research Questions

Students' responses to the completion survey partially answer two of the following TAACCCT grant required research questions:

- How were programs and program design improved or expanded using grant funds?
- Did the grantees conduct an in-depth assessment of participants' abilities, skills, and interests to select participants into the grant program?

In particular, responses provide information about students' experiences with advisors, registration, and tutoring services funded by grant funds. Responses also reflect students' perceptions about the availability and helpfulness of various resources available through their respective community colleges and success coaches/pathway navigators/career coaches. Students were also asked regarding their experiences with various career preparation tools and resources provided by their community colleges.

RESULTS

Enrollment, Educational and Career Goals. Students were asked why they enrolled in their respective community college and the welding program of study. Most of the students (70.1%) reported that they enrolled at their community college because it was close to home, 45.4% enrolled because they could save money, and 21.5% reported that they enrolled because their community college has a close relationship with industry. Others indicated that they had taken classes at their community college in the past (20.3%) and that they were interested in the cutting edge technology (14.3%; see Table 4). Students heard about their program in a variety of ways, including friends (29.5%), school counselor or advisor (29.5%), family members (17.5%) workforce development (17.9%; see Table 5).

Students were asked whether they had heard about the Elevate Iowa Campaign (see Table 6). Less than one-third (28.3%) of the students have heard of the Elevate Iowa campaign, a statewide marketing campaign funded by the I-AM project. Of these students, the majority (76.1%) had heard about the Elevate Iowa campaign from staff at their respective community college, 11.3% heard about it on the radio, 5.6% heard about it at an event and/or flyer, and 4.2% heard it about it through Iowa Workforce Development (see Table 7).

When welding students were asked what their original educational goal was when enrolling into the program (see Table 8), almost half (48.0%) of the students stated that their goal was to complete a certificate program at their community college, 35.2% indicated that their original goal was to earn a diploma, 7.6% indicated their goal was to complete an AA/AS degree and 5.6% indicated that they just wanted to take a few classes (see Table 8). Students that indicated their goal was to complete the certificate program were asked whether the certificate was credit or non-credit (see Table 9). Almost half (49.2%) of these students reported that the certificate they were completing was a non-credit certificate.

When asked about their original career goal, almost half (46.2%) of the students reported that they wanted to get a job in their field of study and almost 25.3% reported that they wanted to get a job in general. The remainder of students indicated that they wanted to keep their current job (3.2%), get a promotion and/or increase in salary/wages (5.6%) or want to get a better job with a different employer (11.2%; see Table 10).

Advising, Registration, and Tutoring. Students were also asked about their experiences and perceptions about their Success Coach/Pathway Navigator/Career Coach. The majority (76.3%) of students indicated that they had met with someone in an advisor role at their community college (see Table 11). More than half (60.5%) reported that they met with their advisor at least once per semester or monthly, 12.1% met with their advisor once every other week, 12.6% met with an advisor weekly, and 8.4% met with an advisor more than one time per week (see Table 12). Overall, the majority (76.2 to 90.0%) of students agreed that their advisors were friendly, helpful, knowledgeable about program requirements and transferring to another college, available/accessible, and helpful in setting goals (see Table 13).

In general, students reported that their advisors provided the following resources: tutoring, financial aid services/counseling, advising, resume writing, and workshops (see Table 14). A majority (77.8%) of the responding students used advising, 70.4% used financial aid services/counseling, and 60.3% used resume writing. Almost half (49.7%) of the responding students reported that they used workshops and over one-third (34.4%) reported using tutoring services (see Table 14). Overall, students found the resources listed above to be helpful (see Table 14).

KeyTrain/Career Ready 101. Students were about their use of KeyTrain/Career Ready 101 (i.e., online preparation resources; see Table 15). Less than one-third (28.0%) of the students reported that they used KeyTrain/Career Ready 101 at their community college. Among students that did use KeyTrain/Career Ready 101, 90.6% of students found it useful (see Table 16). A few students indicated that it was not useful because it was not used in order to get a job in their field (see Table 17).

Among students that indicated it was helpful, it was used for math remediation, improvement in the National Career Readiness Certificate (NCRC) score, and resume writing (see Table 18). Among students that reported that they did not use Key Train/Career Ready 101, 40.4% reported that it was not offered to them and 26.5% did not see the value in it (see Table 19). The remaining students indicated various reasons for not using it such as not knowing about it, not having time, or had already taken the NCRC (see Table 19).

Approximately one-fourth (24.3%) of the students reported that someone (e.g., advisor, career navigator, success coach) discussed Credit for Prior Learning with them (see Table 20). Students that indicated that they had discussed Credit for Prior Learning were asked whether they sought out Credit for Prior Learning. Less than half (43.4%) of these students did not, 26.7% reported that they did and were able to earn credit as a result of going through the process and 16.7% reported that they did had sought Credit for Prior Learning but were unable to earn credit as a result (see Table 21)

Student Engagement. Students were asked to rate their level of class attendance (see Table 22). Overall, the majority (77.3%) of the students reported that they either never missed a class or were rarely absent from class, 19.0% reported some absences and 3.6% reported excessive absences (see Table 22). The most common reasons for missing class included: illness, issues with child care, or other obligations such as medical issues, needing to work, or transportation issues (see Table 23).

Students were asked whether they perceived any gaps in being able to learn due to not having access to things they need to do so (see Table 24). The majority (92.7%) of students felt that they did have access to everything they needed in order to learn. Among students that indicated they do not have all that they needed, they indicated that they needed access to materials, better/more teachers, hands on environments and time to learn (see Table 25).

Students were also asked whether they participated in job fair type events organized by their community college (see Table 26). Half (51.3%) of the students responding participated in industry tours. 49.2% participated in the career fairs, 28.9% participated in mock interviews with employers, and 34.0% took advantage of having an employer look over their resume (see Table 26).

Future Career and Educational Plans. Students were asked to identify all of the third party certifications they took as students (see Table 27). Almost half (48.5%) of the students took the American Welding Society (AWS) certification, 43.7% of the students took the NCRC as their third party certification, 4.3% took the Manufacturing Skills Standards Council Certified Production Technician (MSSC CPT) certification, and 22% did not take any certifications.

Students were asked why they had chosen to take the third party certification (see. Table 28). Approximately 45.6% of the students who took the third party certifications reported that it was a requirement of their program, 45.6% reported that they thought it would help them get a job, and 41.2% reported that they took it for personal satisfaction (see Table 29). Several students reported that they did not take the third party certification because they did not know it was available, while others reported that it was not needed, or they were not ready to take it (see Table 29).

Students were asked whether they planned to continue their education now that they have completed the program. A majority (73.2%) of the students reported that they plan to continue their education; 35.5% plan to continue their education right away and 37.7% indicated that they will take a break before returning to continue their education. The remaining 26.8% indicated that they do not have plans to continue their education.

Students were also asked about their career plans now that they have completed the program. About half (55.8%) reported that they will seek employment, 17.3% will begin a new job that they have already secured, and 9.1% reported that they will continue in their current job along with a salary increase and/or promotion (see Table 31).

Students were asked whether they would recommend their program to others. Almost all (99.1%) of students responded that they would recommend their program of study to others.

The following section describes results from the Student Completion survey: Enrollment/Goals, Advising/Registration and Tutoring, Engagement, and Career Questions.

ENROLLMENT/GOALS

The following section describes students' reasons for enrolling at their respective community college, how they heard about the community college, choosing a particular major/program, whether they are familiar with the Elevate Iowa campaign and to indicate their educational and career goals.

Table 4.

Why did you enroll at your community college? (Select all that apply)

Response	Percentage
Close to home	70.1
Cost savings	45.4
Cutting edge technology	14.3
Challenging classes	8.4
I've taken classes at the community college in the past	20.3
Easy to transfer to another community college	5.6
My community college has a close relationship with business and industry	21.5
Other	7.6

Note: The percentages do not add up to 100%.
n=251
Responses from the "Other" choice: Good program (4)
Athletics (2)
Offer specific class (2)
Class was paid for (1)
Transferred (1)
WIA (1)

Table 5.
How did you hear about your major/program of study? (Select all that apply)

Marketing Mediums	Percentage
Television	3.6
Radio	7.6
Social media (e.g., Facebook, Twitter, YouTube)	4.4
School counselor or advisor	29.5
I have previously taken classes at this community college	13.5
Employer/work	6.8
I heard about it from a friend	31.5
I heard about it from a family member	17.5
Flyer	6.4
Workforce Development	17.9
Other (please specify)	12.0

Note: The percentages do not add up to 100%.
n=251
Responses from the "Other" choice: Research (5)
Athletics (2)
Billboard (2)
Job Fair (2)
Paper (2)
Project of Iowa (2)
Dislocated worker (1)
Tour (1)
Walk in (1)

Table 6.
Have you heard about the Elevate Iowa campaign? (Select one)

Response	Percentage
Yes	28.3
No	71.7

n=251

Table 7.

How did you hear about the Elevate Iowa campaign? (Select all that apply)

Marketing Mediums	Percentage
Radio	11.3
Facebook	4.2
Flyer/handout	5.6
Website – Elevateiowa.com	1.4
Event	5.6
From a friend or family member	4.2
From work, employer, or colleague	0.0
At my community college/from community college staff	76.1
Workforce Development	4.2
Other (please specify)	1.4

Note: The percentages do not add up to 100%.
n=71
Responses from the "Other" choice: Manufacturing Day (1)

Table 8.

What was your original <u>educational</u> goal when you enrolled? (Please select the one that best describes your goal)

Educational Goal	Percentage
Take a few classes	5.6
Complete a Certificate Program	48.0
Complete a Diploma	35.2
Complete an AA/AS degree	7.6
Transfer to a 4 year college	2.0
Other	1.6

n=248
Responses from the "Other" choice: Weld for personal use (2)
Change of career (1)
GED (1)

Table 9.

You indicated that your original goal was to complete a certificate. Was the certificate for credit or non-credit?

Certificate Options	Percentage
Credit Certificate	35.0
Non-Credit Certificate	49.2
I don't know	15.8

n=120

Table 10.

What was your original career goal when you enrolled? (Please select the one that best describes your goal)

Career Goal	Percentage
Get a job	25.3
Get a job in my field	46.2
Keep my current job	3.2
Get a promotion and/or increase my salary/wages at my current job	5.6
Get a better job with different employer within the same field as my current job	11.2
Other	8.4

n=249

Responses from the "Other" choice:

Better job opportunity (7)
Learn a new skill (5)
Weld for personal use (3)
Increase welding knowledge (2)
Become self-employed (1)
Learn a trade (1)

ADVISING/REGISTRATION AND TUTORING

The following section describes students' perceptions of their Success Coach/Pathway Navigator/Career Counselor, how often they meet with them, their perceptions of the KeyTrain/Career Ready 101 training programs, and whether they were aware of Credit for Prior Learning.

Table 11.

Have you met with someone at your community college who helps you do things like schedule classes, figure out other resources on campus, look for jobs, or just check on you? These people go by titles like Success Coach, Pathway Navigator, and Career Counselor. (Select one)

Responses	Percentage
Yes	76.3
No	23.7

n=249

Table 12.

How often do you meet with your Success Coach/Pathway Navigator/Career Counselor? (Select one)

Meeting Times	Percentage
Once per semester	27.9
Monthly	32.6
Once every other week	12.1
Once per week	12.6
More than once per week	8.4
I have not met with a Success Coach/Pathway Navigator/Career Counselor in the past year	6.3

n=190

Please indicate the extent with which you agree with the following statements.

Table 13.
My Success Coach/Pathway Navigator/Career Counselor…

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Total Agree
is friendly	189	5.3	1.1	4.2	18.0	71.4	89.4
is helpful	189	5.3	0.5	4.2	21.2	68.8	90.0
is knowledgeable about program requirements	189	4.8	1.1	6.9	22.2	65.1	87.3
is knowledgeable about requirements for transferring to another college	189	4.2	0.5	19.0	22.8	53.4	76.2
is available and/or accessible	189	5.3	2.1	4.2	25.4	63.0	88.4
helped me set goals	189	4.8	1.6	11.6	23.8	58.2	82.0

Note: Values reflect percentages.

Table 14.

In the following section, we are interested in whether your received any of the resources listed below from your Success Coach/Pathway Navigator/Career Counselor or someone at your community college and the extent with which you thought these resources were helpful.

	Did you receive any of the resources listed on the left from the *Success Coach/ Pathway Navigator/Career Counselor?*			Please rate the level of helpfulness of the resources provided by the *Success Coach/Pathway Navigator/Career Counselor*			
Resources	*n*	Yes	No	Not at all Helpful	Slight Helpful	Fairly Helpful	Very Helpful
Tutoring	189	34.4	65.6	8.9	7.6	21.5	62.0
Financial Aid Services/Counseling	189	70.4	29.6	1.5	8.8	14.7	75.0
Advising	189	77.8	22.2	3.2	4.5	11.6	80.6
Resume writing	189	60.3	39.7	4.3	2.6	18.3	74.8
Workshops	189	49.7	50.3	5.1	6.1	13.1	75.8

Note: Values reflect percentages.

Table 15.
Did you use KeyTrain/Career Ready 101 at your college? KeyTrain and Career Ready 101 are online resources that help student prepare to take the NCRC, and other resources like math tutoring and learning about personal finance.

Response	Percentage
Yes	28.0
No	72.0

n=189

Table 16.
Did you find KeyTrain/Career Ready 101 useful?

Response	Percentage
Yes	90.6
No	9.4

n=53

Table 17.
Tell us why you didn't find KeyTrain/Career Ready 101 useful.

Responses Provided	Percentage
Did not use it to get a job	66.7
Not useful	33.3

n=3

Table 18.
What components of KeyTrain/Career Ready 101 did you use?

KeyTrain Components	Percentage
Math remediation	39.6
To improve my NCRC score	47.2
Resume writing	39.6
Financial literacy	15.1
Other (please specify)	11.3

Note: The percentages do not add up to 100%.
n=53
Responses from the "Other" choice: I don't know (1)
Practice test (1)

Table 19.
Why didn't you use KeyTrain/Career Ready 101?

Response	Percentage
Not offered	40.4
Did not see the value	26.5
Other (please specify)	33.1

n=136
Responses from the "Other" choice: Did not have time (8)
Did not know about it (8)
Already done (7)
Did not do it (5)
Did not need it (3)
Couldn't take (1)
Night program (1)
Used Tooling U (1)

Table 20.
Did anyone (e.g., Advisor, Career Navigator, Success Coach, Pathway Navigator, Career Counselor, Instructor) at your college talk to you about "Credit for Prior Learning?" Credit for Prior Learning is sometimes called "experience credit" or "alternative credit". Students earn college credit for what they already know or have learned someplace else. (Select one)

Response	Percentage
Yes	24.3
No	75.7

n=247

Table 21.
Did you seek college credit for your prior experiences or knowledge gained outside of your college?

Credit for Prior Learning	Percentage
Yes, I did earn credit through the process	26.7
Yes, but I did not earn credit through the process	16.7
No	56.7

n=60

ENGAGEMENT

The following section describes students' rating of their class attendance, reasons, if any, for missing class, whether they have all they need to learn, and their participation in community college organized events.

Table 22.
In general, how would you rate your class attendance? (Select one)

Absences	Percentage
Excessive absences	3.6
Some absences	19.0
Rarely absent	44.5
Never miss class	32.8

n=247

Table 23.
If you miss class, what are the main reasons for missing class? (Select all that apply)

Reasons for Missing Class	Percentage
Illness	42.5
Child care issues	12.1
Transportation issues	13.0
Need to work/can't get time off	12.1
Other	19.4
Never miss class	25.5

Note: The percentages do not add up to 100%.
n=247
Responses from the "Other" choice:
Family emergency/issues (10)
Funeral (5)
Medical (4)
Work (4)
Appointment (3)
Vacation (3)
Child born (2)
Meeting (2)
Schedule conflict (2)
Bus late (1)
Firefighter calls (1)
Live far away (1)
Moving (1)

Table 24.
Did you have access to everything you need in order to learn?

Response	Percentage
Yes	92.7
No	7.3

n=247

Table 25.
What did you need in order to learn?

Responses	Percentage
Materials	29.4
Better/more teachers	17.6
Hands on environment	11.8
Time	11.8
Better transportation	5.9
Listen and learn	5.9
More classes	5.9
Own welding helmet	5.9

n=17

Table 26.
Did you participate in any of the following events organized by your community college?

Events	*n*	Yes	No
Career fair	240	49.2	50.8
Tour of industry	238	51.3	48.7
Employer looked over my resume	235	34.0	66.0
Mock interviews with employers	235	28.9	71.1
Other (please specify)	111	8.1	91.9

Note: Values reflect percentages.
Responses from the "Other" choice: Field trip (1)
Career readiness (1)

CAREER AND EDUCATIONAL PLANS

The following section describes third party certifications taken by students, why they chose those specific certification, students' future education and career plans, and whether they would recommend program to others.

Table 27.
Which third party certification did you take? (Select all that apply)

Certifications	Percentage
AWS (American Welding Society)	48.5
NIMS (National Institute for Metalworking Skills)	0.9
MSSC CPT (Manufacturing Skills Standards Council Certified Production Technician)	4.3
MSSC CLT (Manufacturing Skills Standards Council Certified Logistics Technician)	0.0
APICS CPIM (American Production and Inventory Control Society Certified in Production and Inventory Management)	0.4
APICS CSCP (American Production and Inventory Control Society Certified Supply Chain Professional)	0.0
SME (Society of Manufacturing Engineers)	0.0
NCRC (National Career Readiness Certificate)	43.7
Did not take any certifications	21.2

Note: The percentages do not add up to 100%.
n=231

Table 28.
Why did you choose to take the third party certification? (Select all that apply)

Responses	Percentage
Helped me get a job	45.6
Was a requirement of my program	45.6
Helped me advance in my job	17.0
Personal satisfaction	41.2
Other (please specify)	3.3

Note: The percentages do not add up to 100%.
n=182
Responses from "Other" choice: Needed skills (2)
Emily told me to (1)
To complete advanced welding program (1)

Table 29.
Why did you choose not to take the third party certification? (Select all that apply)

Reasons for No Third Party Certification	Percentage
Too costly	12.2
I did not see the value	12.2
Too challenging	0.0
Other (please specify)	28.6
Did not know it was available	46.9

n=49
Responses from "Other" choice: Will do later (6)
Cannot be certified (1)
Chose not to (1)
Live elsewhere (1)
No time (1)

Table 30.
Now that you have completed the program do you plan to continue your education?

Education Plans	Percentage
Yes, I plan to continue my education now	35.5
Yes, but I will take a break for now and return sometime in the future	37.7
No, I don't plan to continue my education	26.8

n=231

Table 31.
What are your career plans now that you have completed the program? (Select the one that best describes your plans)

Career Plans	Percentage
Seek internship	4.3
Begin internship secured before completion of program	1.7
Seek employment	55.8
Begin new job (have already secured a position)	17.3
Begin new position with current employer	2.2
Continue current job with salary increase and/or promotion	9.1
Other (please specify)	9.5

n=231

Responses from "Other" choice:
Continue education (13)
Own/start business (3)
Weld for personal use (1)

Table 32.
I would recommend this program to others.

Response	Percentage
Yes	99.1
No	0.9

n=231

Appendix G:

Student – Six Months Post Graduation Survey Report: Spring 2016

METHODOLOGY

A survey was developed and distributed to students six months following their completion of an I-AM program. The purpose of the questionnaire was to survey students about their program of study and their experience while in the I-AM program. The survey was distributed five times between Spring 2015 and Spring 2016 to a total of 227 students. A total of ten students had responded to the survey by March, 2016 (response rate = 4.4%). The ten respondents represented seven of the 15 community colleges (see Table 1). The number of responses by college ranged from zero to four (see table below). The majority (60%) of respondents indicated that their major/program of study was Welding, 30% indicated that their major/program of study was Machining/CNC/Tool and Die, and the remaining 10% indicated "other" as their major/program of study (see Table 2).

Table 1.
Which community college did you attend?

Community College	Number of Respondents
Des Moines Area Community College	1
Eastern Iowa Community Colleges	0
Hawkeye Community College	1
Iowa Central Community College	0
Indian Hills Community College	1
Iowa Lakes Community College	0
Iowa Valley Community College District	0
Iowa Western Community College	0
Kirkwood Community College	1
North Iowa Area Community College	4
Northeast Iowa Community College	1
Northwest Iowa Community College	0
Southeastern Community College	1
Southwestern Community College	0
Western Iowa Tech Community College	0

n=10

Table 2.
What was your major/program of study?

Signature Programs	Percentage
Industrial Automation	0.0
Industrial Maintenance	0.0
Machining/CNC/Tool and Die	30.0
Manufacturing Technician/Technology	0.0
Robotics	0.0
Transportation and Logistics	0.0
Welding Technician/Technology	60.0
Other	10.0

n=10
Responses from the "Other" choice: *This was just certificate work (1)*

Respondents were asked whether they are currently employed in their field of study, and if they are employed they are asked whether they are part time or full time, their job title, and the name of their employer. Respondents were asked whether they were satisfied with various aspects of their program of study. For example, they were asked about their satisfaction with their current job situation, the program, the quality of advising, the number of job opportunities available, and with job placement opportunities.

They were asked whether anything was missing in their program and to describe what they thought was missing.

Implementation Analysis Research Question

Students' responses to the survey partially answered one of the four required TAACCCT grant research questions:

- How were programs and program design improved or expanded using grant funds?

Student responses identified their satisfaction with the program, whether they thought the program helped prepare them for a job in their field, their classrooms, job opportunities, and in particular, whether they thought there was anything missing from their program.

RESULTS

Six months post-graduation, approximately 30% of respondents indicated that they are employed in a job related to their field of study, 40% indicated that they are employed but within a different field of study, 30% indicated that they were unemployed (see Table 3). Among the three students that indicated they were employed in their field of study, two are working full time and one is working part time (see Table 4). Table 5 presents the names of employers provided by respondents. Two of the respondents work as a machinist and one works as a welder (see Table 6).

Respondents were asked to rate their level of satisfaction on various aspects of their program. The majority (75.0%) indicated they are satisfied with their current job situation, 75.0% indicated their program prepared them for their career, 75.0% indicated they would recommend their program to others, 75.0% are satisfied with the quality of their education, 75.0% are satisfied with the number of available job opportunities, and 75.0% are satisfied with the job placement opportunities (see Table 7).

Respondents were asked whether there was anything they should have learned from their program but did not. Five of the ten respondents indicated that there were things missing and the remaining said no (see Table 8). The five students that responded “yes” indicated that the program could have provided more on technique, bore gages, and internal measuring. One student thought the program was too short and another thought more could have been provided on aluminum (see Table 9).

Table 3.
Are you currently employed in your field?

Employment	Percentage
Yes	30.0
No, but I am employed in a different field	40.0
No, I am unemployed	30.0

n=10

Table 4.
Are you employed part time or full time in your field?

Employment	Percentage
Part time	33.3
Full time	66.7

n=3

Table 5.
What is the name of your employer?

Responses	Percentage
Geater Manufacturing & Machining	33.3
Mi-t-m	33.3
Vermeer	33.3

n=3

Table 6.
What is your job title?

Responses	Percentage
Machining Specialist	33.3
Machinist	33.3
Welder	33.3

n=3

Table 7.
Please indicate the extent to which you agree with each of the following statements.

Statements	*n*	Very Dissatisfied	Dissatisfied	Neither Satisfied nor Dissatisfied	Satisfied	Very Satisfied
I am satisfied with my current job situation.	8	12.5	12.5	0.0	50.0	25.0
My program prepared me for my career.	8	12.5	12.5	0.0	37.5	37.5
I would recommend my program to others.	8	12.5	12.5	0.0	25.0	50.0
I am satisfied with the quality of my education.	8	12.5	12.5	0.0	12.5	62.5
My experiences at my community college have better prepared me for further study (e.g., continuing my education, on the job training).	8	12.5	12.5	0.0	37.5	37.5
The classroom environments encouraged my success.	8	0.0	12.5	12.5	25.0	50.0
I am satisfied with the quality of the advising.	8	12.5	12.5	0.0	50.0	25.0
I am satisfied with the number of job opportunities available to me.	8	0.0	0.0	25.0	37.5	37.5
I am satisfied with the job placement opportunities.	8	12.5	0.0	12.5	12.5	62.5

Note: Values reflect percentages.

Table 8.
Looking back at your program, is there something you should have learned that you did not?

Response	Percentage
Yes	62.5
No	37.5

n=8

Table 9.
What was your program missing?

Responses	Percentage
Aluminum	20.0
More in depth on compensating dimensions/locations	20.0
More time on technique	20.0
More time with bore gages & internal measuring	20.0
Program is entirely too short	20.0

n=5

Appendix H:

Project Leads Survey Report: Fall 2014

METHODOLOGY

A survey was developed and distributed to 26 I-AM Project Leads (or Committee Chairs) in September 2014. A total of 20 Project Leads responded (response rate = 76.0%) representing each of the 15 participating community colleges (see Table 1) Almost all (90%) of the participating community colleges offer a Welding Technician/Technology I-AM signature program at their respective college, 30.0% offer Machining/CNC/Tool Die, 45.0% offered Industrial Maintenance, 15% offer Manufacturing Technician/Technology, 10.0% offer Industrial Automation, and 5.0% offer Transportation and Logistics (see Table 2).

Table 1.
Which community college is yours?

Community College	Number of Responses
Des Moines Area Community College	3
Eastern Iowa Community College	1
Hawkeye Community College	1
Iowa Central Community College	1
Indian Hills Community College	1
Iowa Lakes Community College	1
Iowa Valley Community College District	1
Iowa Western Community College	1
Kirkwood Community College	2
North Iowa Area Community College	1
Northeast Iowa Community College	1
Northwest Iowa Community College	2
Southeastern Community College	1
Southwestern Community College	1
Western Iowa Tech Community College	2

n=20

Table 2.
Which programs does your community college offer as part of the I-AM program? (Select all that apply)

Signature Program	Percentage
Industrial Automation	10.0
Industrial Maintenance	45.0
Machining/CNC/Tool and Die	30.0
Manufacturing Technician/Technology	15.0
Robotics	5.0
Transportation and Logistics	5.0
Welding Technician/Technology	90.0

Note: The percentages do not add up to 100%.
n=20

The Project Leads were asked about their specific communication and reachability with various groups including the Lead Project Team at Des Moines Area Community College, faculty members, and students. The respondents were also asked to rate the general communication of the overall project and how the information travel time could be improved.

The Project Lead Survey respondents were also asked about their community college's plans in case an incident (e.g., faculty are sick, fire, no participants) occurred. They were also asked if one has occurred, then how did they handle the issue and what were the impacts to the students. Finally the survey respondents were asked about the issues, strengths, and weaknesses of the I-AM project and if they felt that the project was sustainable after the grant period.

Implementation Analysis Research Question

Responses to the Project Leads Survey partially answers one of the following required TAACCCT grant research questions:

- How were programs and program design improved or expanded using grant funds?

In particular, responses provided address issues (e.g., communication), alternative activities, and sustainability of the I-AM project. Strengths and challenges identified by respondents also provide information about the issues experienced by community colleges in the implementation of the I-AM project.

RESULTS

Communication. To evaluate communication about the I-AM project, Project Leads were asked to rate the effectiveness of communication between themselves and other I-AM members, advisors, and support staff. The majority (68.4%-94.7%) of Project Leads found communication to be either effective or very effective across all groups (e.g., I-AM faculty members, college leadership, advisors, support staff, students; see Table 3) and that overall, 66.7%-94.5% of Project Leads thought these groups were accessible either most of the time or all of the time (see Table 4). The majority (57.9%-89.5%) of Project Leads agreed that communication was shared in a timely manner, had the information needed to do an effective job, and that faculty, college leadership, support staff and advisors were on board with the grant (see Table 5).

Alternative Plans. Project Leads were asked whether their community college have had to engage in alternative plans in the event of something unexpected that may have interfered with the implementation of the project. Slightly more than half (55.6%) of Project Leads reported that they have not had to implement an alternative activity (e.g., fire, equipment breaking; see Table 6). Among the Project Leads that indicated that they have had to implement alternative activities, 37.5% indicated that they rescheduled class, 25.0% indicated that they used the time to provide remediation, 12.5% indicated that classes were dropped as a result of not having enough students (see Table 7). Whether these unexpected occurrences have had an impact on the program or on students was mixed; 25% reported positive impacts, 25% reported negative impacts; 25% reported that it did not impact the program at all (see Table 8).

Strengths and Challenges in Implementing the I-AM Program. Project Leads were asked whether their community college had experienced any issues implementing the I-AM program. Five (27.8% see Table 9) respondents indicated that they had experienced issues such as, being short staffed, that their leadership was opposed to the common core objectives, and that online and blended delivery is difficult to implement in some of the signature programs (see Tables 10 and 11).

Project Leads were asked to identify the top three strengths and weaknesses of their signature programs at their respective community colleges. Strengths of the signature programs included curriculum, expanded/new programs, partnerships with employers and Iowa Workforce Development, ATF/AWS accreditation, equipment/renovation, and increased enrollment (see Table 12). Weaknesses/challenges of the signature programs included problems with communication, completing curriculum alignment, lack of buy in, and issues with embedding certifications/instructor resistance (see Table 13).

Sustainability of the I-AM Project. All (100.0%) of Project Leads indicated that they thought the program was sustainable (see Table 14). When asked what can be done to ensure sustainability, 31.3% indicated that continuation of grant specific positions and implementation of marketing plan would ensure sustainability, 18.8% indicated that it needed to be a college-wide effort, and 12.5% indicated that maintaining/developing relationships with employer partners and support for both credit and non-credit courses would ensure sustainability of the program (see Table 15).

The following section describes results of the Project Leads Survey: Communication, Plans, and Strengths/Weaknesses.

COMMUNICATION

The following section describes results on the quality of communication between the participants and various other groups including other I-AM faculty team and faculty members, college leadership, advisors, community college project team members, and students.

Table 3.
Please rate the quality of communication between you and the following groups (specific to the grant).

Groups	*n*	Very Ineffective	Ineffective	Somewhat Ineffective	Somewhat Effective	Effective	Very Effective
I-AM faculty members	19	0.0	0.0	5.3	15.8	52.6	26.3
College leadership	19	0.0	5.3	5.3	0.0	68.4	21.1
Advisors/ navigators/ career coaches/ success coaches	19	0.0	0.0	5.3	15.8	42.1	36.8
Community college project team members	19	0.0	0.0	0.0	15.8	47.4	36.8
Students	19	0.0	0.0	5.3	26.3	42.1	26.3
Support staff	19	0.0	5.3	0.0	15.8	47.4	31.6
I-AM Project Team (DMACC personnel)	19	0.0	0.0	0.0	5.3	52.6	42.1

Note: Values reflect percentages.

Table 4.
How reachable are the following groups at your community college?

Groups	*n*	Never	Rarely	Sometimes	Most of the Time	Always
Students	18	0.0	0.0	16.7	66.7	16.7
Faculty	18	0.0	0.0	27.8	50.0	22.2
College leadership	18	0.0	0.0	27.8	50.0	22.2
Other members of the grant team	18	0.0	0.0	16.7	50.0	33.3
Advisors/navigators/ success coaches/career coaches	18	0.0	0.0	11.1	50.0	38.9
Support staff	18	0.0	0.0	5.6	66.7	27.8
Student services	18	0.0	0.0	33.3	55.6	11.1

Note: values reflect percentages.

Table 5.
Please rate the following statements about communication in your community college (in general).

Communication	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Total Agree
Information travels in a timely manner.	19	0.0	0.0	26.3	57.9	15.8	73.7
I have information I need to do my job effectively.	19	0.0	0.0	21.1	57.9	21.1	79.0
Faculty are on board with this grant.	19	0.0	5.3	36.8	36.8	21.1	57.9
The college leadership are on board with this grant.	19	0.0	0.0	10.5	47.4	42.1	89.5
The support staff are on board with this grant.	19	0.0	0.0	15.8	68.4	15.8	84.2
The advisors are on board with this grant.	19	0.0	0.0	15.8	63.2	21.1	84.3

Note: Values reflect percentages.

PLANS

The following section presents a summary of responses provided by Project Leads describing alternative plans/activity should they have unexpected outcomes (e.g., equipment failure, fire).

Table 6.
Have you needed to implement some sort of alternate activity for the students (for example: if a fire occurred, if a faculty member was sick, or if the necessary equipment broke down and was not fixed right away)?

Response	Percentage
Yes	44.4
No	55.6

n=18

Table 7.
Since you indicated that some sort of alternate activity took place, what was the alternate activity and what was the reason for the alternate activity?

Responses	Percentage
Instructor not available – workshop, class held at a later date	37.5
Fire – NCRC testing	25.0
Remediation	25.0
No participants – dropped class	12.5
Weather	12.5

Note: Some respondents provided multiple responses.
n=8

Table 8.
What were the impacts to the students? Any positive or negative impacts?

Responses	Percentage
Positive impacts	25.0
Negative impacts	25.0
No known impacts	25.0
Students dropped out	25.0
More study time for students	25.0
Inconvenience	12.5

Note: Some respondents provided multiple responses.
n=8

STRENGTHS/WEAKNESSES

The following section describes any issues participants may have had in implementing the I-AM grant program, participants' perceptions of their respective community college's strengths/accomplishments, challenges in implementing the program, and perceptions of sustainability.

Table 9.
Has your community college experienced any issues implementing the I-AM program?

Response	Percentage
Yes	27.8
No	72.2

n=18

Table 10.
What types of issues in implementing the I-AM program has your community college experienced? (Select all that apply)

Issues	Percentage
Equipment	0.0
Not enough funds	0.0
Qualified staff (e.g., advisors, project team, support staff)	0.0
Classroom space	0.0
Faculty	20.0
Technology	0.0
Other (please specify)	80.0

Note: The percentages do not add up to 100%.
n=5
Responses from the "Other" choice:
Leadership not on board (1)
Vacancies at executive level (1)
Major renovation project (1)
Rewriting curriculum (1)

Table 11.
Please explain the issues surrounding the implementation of the I-AM program.

Responses	Percentage
Extremely short staffed	40.0
Leadership opposed to common core objectives	20.0
Online and blended learning with signature programs difficult to do	20.0
Faculty are very busy	20.0
AWS accreditation process	20.0
Rewriting curriculum in a timely manner	20.0

Note: Some respondents provided multiple responses.
n=5

Table 12.
What are the top 3 strengths/accomplishments of the program at your community college?

Responses	Percentage
Curriculum (upgraded, stronger, development, alignment, options)	43.8
Expanded/New programs	37.5
Partnerships with Employers, Iowa Workforce Development	37.5
ATF/AWS credentialing	25.0
Equipment/renovation	25.0
Marketing	25.0
Certifications	18.8
Credit for Prior Learning	18.8
Pathway Navigators	18.8
More options for students	12.5
Non-credit to credit	12.5
Pathways to careers/continuing education	12.5
Program Growth	12.5
Recruitment	12.5
Strong grant team	12.5
NCRC	6.3

Note: Some respondents provided multiple responses.
n=16

Table 13.
What are the top 3 weaknesses of the program at your community college?

Responses	Percentage
Communication issues	37.5
Completing curriculum alignment	37.5
Lack of buy in	37.5
Certifications (embedding, instructor resistance)	25.0
Other non-grant job responsibilities take precedence	25.0
Recruitment/Retention	18.8
CPL	12.5
Marketing	12.5
No sustainability plan	12.5
Outdated facilities	12.5
Slow implementation	12.5
Achieving ATF certification (movement towards)	6.3
Course options	6.3
Digital literacy	6.3
Difficulty in the recruitment of students	6.3
Equipment expense	6.3
Location of community college	6.3
NCRC	6.3
Partnerships	6.3
Realistic budget	6.3
Renovation	6.3
Size of community college	6.3
Too few pathway navigators	6.3

Note: Some respondents provided multiple responses.
$n=16$

Table 14.
Do you think the programs are sustainable after the grant ends?

Response	Percentage
Yes	100.0
No	0.0

n=16

Table 15.
What could be done to ensure/improve sustainability?

Responses	Percentage
Continue grant specific positions	31.3
Marketing plan/implementation of marketing plan	31.3
College effort, not just the I-AM team	18.8
Employer Partners	12.5
Funding support/support in general between credit and non-credit	12.5
Continuously improve curriculum	6.3
Flexibility in course offerings	6.3
New welding facilities	6.3
Recruitment	6.3
Strengthen Credit for Prior Learning	6.3

Note: Some respondents provided multiple responses.
n=16

Appendix I:

Project Leads Survey Report: Spring 2015

METHODOLOGY

A survey was developed and distributed to 24 I-AM Project Leads (or Committee Chairs) in March 2015. A total of 18 Project Leads responded (response rate = 75.0%) representing each of the 15 participating community colleges (see Table 1) Three of the community colleges had two Project Leads respond to the survey and the remaining 13 community colleges had one Project Lead respond (see Table 1). All (100%) participating community colleges offer Welding Technician/Technology programs at their respective college, 44.4% offer Machining/CNC/Tool Die, and 38.9% offered Industrial Maintenance (see Table 2).

Table 1.
Which community college is yours?

Community College	Number of Responses
Des Moines Area Community College	1
Eastern Iowa Community College	2
Hawkeye Community College	1
Iowa Central Community College	2
Indian Hills Community College	1
Iowa Lakes Community College	1
Iowa Valley Community College District	1
Iowa Western Community College	1
Kirkwood Community College	2
North Iowa Area Community College	1
Northeast Iowa Community College	1
Northwest Iowa Community College	1
Southeastern Community College	1
Southwestern Community College	1
Western Iowa Tech Community College	1

n=18

Table 2.
Which programs does your community college offer as part of the I-AM project? (Select all that apply)

Signature Program	Percentage
Industrial Automation	11.1
Industrial Maintenance	38.9
Machining/CNC/Tool and Die	44.4
Manufacturing Technician/Technology	11.1
Robotics	5.6
Transportation and Logistics	11.1
Welding Technician/Technology	100.0

Note: The percentages do not add up to 100%.

To evaluate the implementation of the I-AM Project, Project Leads were asked about communication between the Project Leads and various other groups including other I-AM faculty, college leadership, advisors, community college project team members, and students. Project Leads were also asked about their respective community college's alternative plans in the event of an unexpected incident (e.g., faculty are sick, fire, no participants), their perception of strengths and weakness of the program, and sustainability of the program when the grant ends.

Implementation Analysis Research Question

Responses to the Project Leads Survey partially answers one of the following required TAACCCT grant research questions:

- How were programs and program design improved or expanded using grant funds?

In particular, responses provided address issues (e.g., communication), alternative activities, and sustainability of the I-AM project. Strengths and challenges identified by respondents also provide information about the issues experienced by community colleges in the implementation of the I-AM project.

RESULTS

Communication. To evaluate communication, project leads were asked to rate the effectiveness of communication between themselves and other I-AM members, advisors, and support staff (see Table 3). The majority of Project Leads found communication to be either effective or very effective across all groups (e.g., I-AM faculty members, college leadership, advisors, support staff, students; see Table 3). In general, Project Leads also agreed that information was shared in a timely manner, had the information needed to do an effective job, and that faculty, college

leadership, support staff and advisors were on board with the grant (see Table 4). A couple of respondents indicated that communication could have been improved by keeping SharePoint up-to-date and by communicating in a timely manner to all parties (see Table 5).

Project Leads were asked to rate the level of accessibility of various groups (e.g., students, faculty, college leadership, other members of the team, etc.). In general, Project Leads perceived that faculty, college leadership, other team members, advisors, support staff and student services were accessible either most of or all of the time (see Table 6). Student accessibility ranged from sometimes to always (see Table 6).

Alternative Plans. Project Leads were asked whether their community college had alternative plans in the event of something unexpected that may interfere with the implementation of the project (see Table 7). The majority (61.1%) of Project Leads reported that they have not had to implement an alternative activity (e.g., fire, equipment breaking, sick faculty member). Of the 38.9% faculty that reported that they have had to implement alternative activities, the majority (71.4%) indicated that faculty were able to work around the issue and 14.3% indicated that alternative classes were offered when they experience a fire (see Table 8)

The majority (77.8%) of Project Leads indicated that they did not experience any issues implementing the I-AM program at their respective community colleges (see Table 10). Among those that did, issues were related to equipment, not having the qualified staff needed, lack of classroom space, faculty, and meeting with resistance from various departmental and division chairs (see Tables 11 and 12).

Strengths and Challenges in Implementing the I-AM Program. Project Leads were asked to identify the top three strengths and weaknesses of their signature programs at their respective community colleges. Strengths of the signature programs included updating of existing programs, ATF/AWS accreditation, creation of new programs, employer partnerships, and increased enrollment (see Table 13). Weaknesses of the signature programs included lack of enrollment in the various programs, developing/implementing Credit for Prior Learning policies, availability of qualified personnel, communication, and the need for more equipment (see Table 14).

Sustainability of the I-AM Project. The majority (94.4%) of Project Leads indicated that they thought the program was sustainable (see Table 15). When asked what can be done to ensure sustainability, 33% indicated that it was already sustainable, others suggested continue to staff with qualified personnel, continue development of the non-credit offerings, continue marketing, and make sure everyone is involved (see Table 16).

The following section describes results of the Project Leads Survey: Communication, Plans, and Strengths/Weaknesses.

COMMUNICATION

The following section describes results on the quality of communication between the participants and various other groups including other I-AM faculty team and faculty members, college leadership, advisors, community college project team members, and students.

Table 3.
Please rate the quality of communication between you and the following groups (specific to the project).

Groups	*n*	Very Ineffective	Ineffective	Somewhat Ineffective	Somewhat Effective	Effective	Very Effective
I-AM faculty members	18	5.6	0.0	0.0	5.6	61.1	27.8
College leadership	18	0.0	5.6	0.0	5.6	61.1	27.8
Advisors/ navigators/ career coaches/ success coaches	18	0.0	0.0	5.6	11.1	44.4	38.9
Community college project team members	18	0.0	0.0	0.0	5.6	55.6	38.9
Students	18	0.0	0.0	5.6	27.8	50.0	16.7
Support staff	18	0.0	0.0	0.0	11.1	61.1	27.8
I-AM Project Team (DMACC personnel)	18	0.0	0.0	0.0	0.0	44.4	55.6

Note: Values reflect percentages.

Table 4.
Please rate the following statements about communication in your community college (in general).

Communication	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Total Agree
Information travels in a timely manner.	18	0.0	11.1	11.1	61.1	16.7	77.8
I have information I need to do my job effectively.	18	0.0	0.0	11.1	66.7	22.2	88.9
Faculty are on board with this grant.	18	5.6	0.0	22.2	44.4	27.8	72.2
The college leadership are on board with this grant.	18	0.0	5.6	0.0	44.4	50.0	94.4
The support staff are on board with this grant.	18	0.0	0.0	0.0	66.7	33.3	100.0
The advisors are on board with this grant.	18	0.0	5.6	5.6	61.1	27.8	88.9

Note: Values reflect percentages.

Table 5.
What could be done to improve information travel time?

Responses	Percentage
Communication & timely inclusion of all parties	50.0
Keep SharePoint up-to-date	50.0

n=2

Table 6.
How reachable are the following groups at your community college?

Groups	*n*	Never	Rarely	Sometimes	Most of the Time	Always
Students	18	0.0	0.0	33.3	55.6	11.1
Faculty	18	0.0	5.6	5.6	55.6	33.3
College leadership	18	0.0	5.6	5.6	50.0	38.9
Other members of the grant team	18	0.0	0.0	5.6	50.0	44.4
Advisors/navigators/ success coaches/career coaches	18	0.0	5.6	0.0	44.4	50.0
Support staff	18	0.0	0.0	0.0	50.0	50.0
Student services	18	0.0	5.6	11.1	55.6	27.8

Note: values reflect percentages.

ALTERNATIVE PLANS

The following section describes any alternative activities for students should an unexpected event occur.

Table 7.
Have you needed to implement some sort of alternate activity for the students (for example: if a fire occurred, if a faculty member was sick, or if the necessary equipment broke down and was not fixed right away)?

Response	Percentage
Yes	38.9
No	61.1

n=18

Table 8.
Since you indicated that some sort of alternate activity took place, what was the alternate activity and what was the reason for the alternate activity?

Responses	Percentage
Faculty worked around the issue	71.4
Offered other classes when fire occurred	14.3
None	14.3

n=7

Table 9.
What were the impacts to the students? Any positive or negative impacts?

Responses	Percentage
Class was cancelled	28.6
Negative	28.6
Course competencies considered	14.3
Delay on 3rd party credentials and curriculum	14.3
Lost students due to repairs	14.3
Positive	14.3
None	14.3

Note: Some respondents provided multiple responses.
n=7

STRENGTHS/WEAKNESSES

The following section describes whether issues participants may have had in implementing the I-AM grant program, participants' perceptions of their respective community college's strengths/accomplishments, challenges in implementing the program, and perceptions of sustainability.

Table 10.
Has your community college experienced any issues implementing the I-AM program?

Response	Percentage
Yes	22.2
No	77.8

n=18

Table 11.
What types of issues in implementing the I-AM program has your community college experienced? (Select all that apply)

Issues	Percentage
Equipment	25.0
Not enough funds	0.0
Qualified staff (e.g., advisors, project team, support staff)	25.0
Classroom space	25.0
Faculty	25.0
Technology	0.0
Other (please specify)	75.0

Note: The percentages do not add up to 100%.
n=4
Responses from the "Other" choice: Issues with division chair (1)
Resistance from Industrial Division Chair (1)
Slow hiring process (1)

Table 12.
Please explain the issues surrounding the implementation of the I-AM program.

Responses	Percentage
Did not have lab space	25.0
Division chair was uncooperative with curriculum	25.0
Faculty & Industrial Technology Chair challenged implementation	25.0
Tough to find part time instructors	25.0

n=4

Table 13.
What are the top 3 strengths/accomplishments of the program at your community college?

Responses	Percentage
Updating existing programs	61.1
ATF/AWS accreditation	27.8
Creation of new programs	27.8
Employer partnerships	27.8
Enrollment	22.2
Expansion of facilities	16.7
New equipment	16.7
NIMS implementation/accreditation	16.7
Developed career pathways	11.1
Navigators	11.1
Non-credit certificate programs	11.1
Strengthening of CPL policies	11.1
Allocation of resources	5.6
Faculty involvement in program	5.6
Greater learning capacity	5.6
Incorporating NCRC	5.6
Instructor certifications	5.6
Leadership	5.6
Non-credit to credit curriculum development	5.6
Starting programs at satellite sites	5.6
Team work	5.6

Note: Some respondents provided multiple responses.
n=18

Table 14.
What are the top 3 weaknesses of the program at your community college?

Responses	Percentage
Lack of enrollment in various programs	27.8
Developing/implementing CPL policies	22.2
Availability of qualified personnel	16.7
Communication	16.7
Need more equipment	16.7
Additional staff is needed	11.1
Confusion about Elevate and other programs	11.1
Curriculum out of date	11.1
Implementation of a district-wide program difficult	11.1
Incorporating 3rd party credentials	11.1
Involvement from administration	11.1
Issues with faculty	11.1
Issues with student completion/retention	11.1
Very time consuming	11.1
Competing priorities	5.6
Data collection	5.6
Lack of knowledge about programs	5.6
Lack of pathways from high school	5.6
Lack of space	5.6
Needs versus sustainability	5.6
Non-credit to credit alignment	5.6
Not a strong program	5.6
Student preparedness	5.6
Student surveys	5.6
TAA student enrollment	5.6
Tracking system is a challenge	5.6

Note: Some respondents provided multiple responses.
n=18

Table 15.
Do you think the programs are sustainable after the grant ends?

Response	Percentage
Yes	94.4
No	5.6

n=18

Table 16.
What could be done to ensure/improve sustainability?

Responses	Percentage
Already sustainable	33.3
Add people to/continue development of non-credit offerings	16.7
Continue marketing	11.1
Make sure everyone is involved	11.1
Continue to evaluate programs and curriculum	5.6
Cut down on some costs	5.6
Hire advisors	5.6
More funding for program staff	5.6
Strict oversight by college leadership	5.6

n=18

Appendix J:

Project Leads Survey Report: Spring 2016

METHODOLOGY

A survey was developed for and distributed to 18 Project/Grant Leads at each of the 15 community colleges in January 2016. A total of 15 Project/Grant Leads representing 14 of the 15 community colleges (see Table 1) responded (response rate = 93.8%). The number of Project Leads by college ranged from zero to two. The percentage of I-AM signature programs offered by the community colleges is presented in Table 2.

Table 1.
Which community college are you associated with?

Community College	Number of Project Leads Responding
Des Moines Area Community College	1
Eastern Iowa Community Colleges	1
Hawkeye Community College	2
Iowa Central Community College	1
Indian Hills Community College	1
Iowa Lakes Community College	1
Iowa Valley Community College District	1
Iowa Western Community College	1
Kirkwood Community College	1
North Iowa Area Community College	1
Northeast Iowa Community College	0
Northwest Iowa Community College	1
Southeastern Community College	1
Southwestern Community College	1
Western Iowa Tech Community College	1

n=15

Table 2.
Which program(s) does your community college offer as part of the I-AM project? (Select all that apply)

Signature Programs	Percentage
Industrial Automation	6.7
Industrial Maintenance	33.3
Machining/CNC/Tool and Die	40.0
Manufacturing Technician/Technology	13.3
Robotics	6.7
Transportation and Logistics	13.3
Welding Technician/Technology	100.0

Note: The percentages do not add up to 100%.
n=15

Credit for Prior Learning. Project Leads were asked about their current Credit for Prior Learning (CPL) policies and practices. In particular, they were asked to indicate whether any Prior Learning Assessments (PLAs) had been implemented since the start of the grant, whether any changes had been made to CPL policies/practices as a result of the I-AM project, to describe any changes made if they had and to explain why they had not made changes if they indicated that no changes had been made. Project Leads were asked whether their community college had partnered with any other Iowa community colleges to rework their Credit for Prior Learning options and to describe any resources they used from other Iowa community colleges. Project Leads were also asked whether they thought the updated CPL policies and practices has had a positive impact on their community college.

Advising and Student Services. Project Leads were asked to indicate the extent that they agree to a series of statements about the I-AM Advising Model created by the Advising and Enrollment Committee. For example, they were asked whether they agreed that the model is a useful tool and whether the model has had a positive impact on students. Project Leads were asked to indicate whether various student services (e.g., KeyTrain, NCRC, CPL) were available to the I-AM students at their community college. They were also asked to indicate the extent that they agree with various statement related to the impact of career navigators/success coaches/advisors.

Elevate Iowa Marketing Campaign. Project Leads were asked to indicate the impact the Elevate Iowa campaign had on recruitment, enrollment, and retention at their community college. Also, Project Leads were asked to indicate their satisfaction with the Elevate Iowa campaign and were asked to provide possible changes to future projects.

Community Colleges' Regional I-AM Marketing Campaign. Project Leads were asked to indicate how active their community college has been in promoting the I-AM project, the frequency of using various marketing mediums in promoting the I-AM program, and whether they thought

their community college's marketing campaign had an impact on recruitment efforts, enrollment, and retention. Project Leads were asked to provide examples of ways the Advanced Manufacturing marketing has impacted their community college and to indicate the likeliness that their community college would continue to market the Advanced Manufacturing programs after the grant ends.

Employer Partners. A series of questions were asked about the community college's I-AM Employer Partners. In particular, Project Leads were asked about the level of involvement of their Employer Partners in various I-AM activities at their community college, and whether their Employer Partners provided various opportunities (e.g., internships, resume review, career fairs) to I-AM students. They were asked whether their community college met Employer Partners' expectations with regards to the students' manufacturing skills and whether their relationships with Employer Partners have been developed or enhanced since the start of the I-AM project.

Curriculum. Project Leads were asked about the impact of various aspects (e.g., the development of the welding curriculum, the certification of instructors, the update of the training facilities) of the I-AM project on students and their community college. They were asked to indicate their agreement with statements regarding how much they learned about modification/creation of the welding curriculum developed by the I-AM welding subcommittee and its impact on their community college and students. Project Leads were also asked about the faculty's I-AM certifications and supportiveness of the I-AM project.

Statewide Management of the I-AM Project. Project Leads were asked to indicate the effectiveness of the statewide administrative team, the statewide project overall, and communication.

Sustainability of the I-AM Project. Project Leads were asked whether various I-AM signature program components would continue to be offered and whether they thought the program was sustainable after the grant ends. In particular, Project Leads were asked to describe the aspects of I-AM they thought are sustainable and what aspects they thought are not sustainable at their community college.

Strengths. In the last section, Project Leads were asked a series of questions about the overall project and associated strengths. Project Leads were asked to share their thoughts about the opportunities the I-AM grant has afforded their community college in updating/improving their facilities, purchasing or updating their equipment, and hiring qualified/training existing instructors. Project Leads were asked to indicate their agreement with the impact the overall I-AM project has had on their community college and their students. Finally, Project Leads were asked what the implementation of the I-AM project has meant to their community college and were asked about thoughts/comments regarding lessons learned.

Implementation Analysis Research Questions

Survey responses provided by Project Leads partially answer each of the following TAACCCT grant required research questions:

- How was the particular curriculum selected, used, or created?
- How were programs and program design improved or expanded using grant funds?
- Did the grantees conduct an in-depth assessment of participants' abilities, skills, and interests to select participants into the grant program?
- What contributions did each of the partners make towards program design, curriculum development, recruitment, training, placement, program management, leveraging resources, commitment to program sustainability?

In particular, the responses regarding the curriculum, communication, implementation of the project, and the opportunities given to students by Employer Partners answered the above questions. Project Leads' responses provide insight about the ways that policies and practices (CPL, curriculum), advising models, and student services developed for I-AM impacted their community colleges and their students and about the ways in which their relationships with Employer Partners also enhanced their program and positively impacted their students.

RESULTS

Credit for Prior Learning. Project Leads were asked whether any Prior Learning Assessments (PLA) practices had been implemented at their community college since the beginning of the grant (see Table 3). Almost half (46.7%) of community colleges indicated they added non-credit to credit, 40% added credit for experiential learning and license for credential for credit, and 33.3% added military transcript evaluation and portfolio review (see Table 3). Project Leads indicated that Credit for Prior Learning (CPL) policies changed as a result of the I-AM project with 20% indicating that extensive changes had been made, 40% indicated that moderate changes had been made, and 40% indicated that minor changes had been made (see Table 4).

When asked to describe the changes made to the CPL policies at their community colleges, Project Leads indicated that new portions had been added to their CPL policies (33.3%), 26.7% indicated that all CPL policies were combined or overhauled, and 26.7% indicated that they changed non-credit to credit work (see Table 5). Over half (60.0%) of the Project Leads indicated their community college partnered with or used resources from other Iowa community colleges to rework their CPL options (see Table 6). Half (50%) of the Project Leads indicated that they partnered with all Iowa Community Colleges, 37.5% indicated that they had partnered with Iowa Western Community College, and 12.5% indicated that they partnered with Center for Law and Social Policy (CLASP; see Table 7).

Almost all (85.7%) indicated the updated CPL practices have had a positive impact on their community college, 64.3% indicated the updated CPL practices have had a positive impact on

their students, and 86.7% indicated the updated CPL practices are sustainable after the grant ends (see Table 8).

Advising and Student Services. Project Leads were asked to indicate the extent with which they agreed with various statements concerning the I-AM Advising Model developed and proposed by the Advising and Enrollment Committee. Over three-fourths (78.6%) agreed that the Intrusive Advising Model/Approach is a useful tool, 75.0% agreed that it has had a positive impact on students, and 71.4% agreed that it is sustainable, and 53.9% agreed that it is looked upon favorably at their community college (see Table 9).

Project Leads were asked to indicate whether their community college offered various student services (e.g., KeyTrain, NCRC) and to rate their perceived level of usefulness for students. All Project Leads indicated that the NCRC, CPL, and third party certifications are provided to students at their community college. Almost all (93.3%) indicated Career Pathways is provided and 86.7% indicated KeyTrain/Career Ready 101 is provided to students by their community college (see Table 10). Of the various student services provided, third party certifications, career pathways, and CPL were thought to be the most useful (see Table 10).

Almost all (93.4%) Project Leads indicated that students benefitted from their interactions with the navigators/career coaches/advisors/success coaches; 86.6% indicated that students have received enhanced support services as a result of the I-AM program; 73.3% indicated that career navigators/career coachers/advisors/success coaches have had a positive impact on their community college and their students (see Table 11).

Elevate Iowa Marketing Campaign. All (100%) Project Leads indicated that the Elevate Iowa Marketing Campaign has had a positive impact on increasing awareness of Advanced Manufacturing; 53.9% indicated that it has had a positive impact on recruitment and the community colleges overall; 41.7% indicated that it has had a positive impact on retention and 38.5% indicated that it has had a positive impact on enrollment (see Table 12).

Approximately 66.6% of Project Leads reported that they are satisfied or very satisfied with Elevate Iowa marketing efforts, the remainder of Project Leads reported that they are neither satisfied nor dissatisfied (see Table 13).

Project Leads were asked to share their thoughts regarding changes or improvement they would make to the statewide marketing campaign should they get a similar opportunity in the future. Changes/improvements they would make included: making sure everyone is aware of the efforts (27.3%), active involvement (18.2%), and having more visibility in the rural areas (18.2%; see Table 14).

Regional I-AM Marketing Campaign. Almost all (86.6%) Project Leads indicated that their community college has been moderately active or very active in marketing and promoting the I-AM project (see Table 15). Project Leads identified the following marketing mediums used to promote the I-AM programs at their community colleges: radio (93.3%), flyers/brochures

(93.3%), Elevate Iowa (86.7%), social media (86.7%), newspaper (66.7%), and the state fair (66.7%; see Table 16).

Project Leads were asked whether their regional marketing campaign had a positive impact on recruitment efforts for various groups. The majority (80%) indicated the campaign had a positive impact on the recruitment of students overall and on overall recruiting, 66.7% indicated it had a positive impact on the recruitment of underemployed students, and 60% indicated that it had a positive impact on recruitment of unemployed students (see Table 17).

Project Leads were also asked whether their regional marketing campaign had a positive impact on the enrollment of various groups. The majority (80%) indicated the campaign had a positive impact on the students overall, 73.3% indicated a positive impact on overall enrollment, 66.7% indicated a positive impact on unemployed students; 60.0% indicated a positive impact on the enrollment of underemployed and 53.3% indicated a positive impact on the enrollment of underrepresented populations (see Table 18). Project Leads were then asked whether their regional marketing campaign had a positive impact on the retention efforts for various groups. Around half (53.3%) indicated the campaign had a positive impact on the retention of students overall and 46.6% indicated the campaign had a positive impact on the retention of unemployed students and overall retention (see Table 19).

Almost all (93.4%) Project Leads indicated that, as a result of the I-AM project, the community colleges have been able to expand efforts to market to the community; 80.0% indicated the community colleges have had increased success in attracting students overall and that it has had an overall positive impact on their community college (see Table 20).

Project Leads were asked to identify other ways that their community college's marketing of the I-AM project has impacted their community college. Projects Leads reported that their community college's marketing of the I-AM project has allowed for increased public awareness, provided opportunities to engage in marketing events/mediums that otherwise would not have taken place, and brought light to program improvements (see Table 21). The majority (73.3%) of Project Leads indicated it was likely or very likely that their community college would continue to market Advanced Manufacturing programs after the grant ends (see Table 22).

Employer Partners. Project Leads were asked to identify their Employer Partners' the level of involvement in various aspects of the project. All Project Leads indicated Employer Partners have at least some to frequent involvement participating in regional and/or local advisory boards and/or Elevate Iowa, in providing input on curriculum, identification of occupational needs, providing access to company/business facilities for project meetings/trainings, and sending employees to the community colleges for specialized or incumbent training; and assistance in identifying potential program instructors and faculty (see Table 23).

Project Leads were asked to share any opportunities Employer Partners provide to their students. Project Leads indicated Employer Partners provide tours of their facilities, company sponsored

training, attend career fairs, provide internships, hire students prior to graduation, and provide scholarships/tuition/tuition reimbursement (see Table 24).

Project Leads were asked whether their community college has had a significant impact and/or has met expectations in meeting industry needs in several areas. The majority (81.4%) indicated their community college has exceeded expectations in producing quality workers to meet hiring needs, 73.4% indicated their community college has exceeded expectations in producing students that have the technical skills/abilities required to begin working with minimal training or guidance and 66.6% indicated their community college has exceeded expectations in providing opportunities for the upskilling of the workforce (see Table 25).

Project Leads described the ways in which the preparation of skilled workers by their community college has met industry needs/expectations. Projects Leads reported that employers investing time in the project, students have improved skills needed to work, adding third party credentials, and the modification of the program structure (see Table 26).

The I-AM program has led to the development and/or enhancement of relationships with Industry/Employer Partners since the start of the I-AM project. All (100%) indicated their community college developed strong relationships or enhanced existing relationships with Industry/Employer Partners, 93.3% have developed strong relationships or enhanced existing relationships with Workforce Development, and 86.7% have developed or enhanced their relationship with Business Associations since the start of the I-AM project (see Table 27). A few Project Leads indicated that these relationships have been strengthened because employers are more involved and because employers encourage professional development (see Table 28).

Curriculum. Project Leads were asked whether various aspects related to the modification/creation of the I-AM curriculum had a positive impact on *students.* Almost all (93.4%) Project Leads indicated that the updated training facilities had a positive impact on students; 86.7% indicated the audited/aligned curricula and the ongoing review of the curriculum had a positive impact on students; 85.8% indicated certification of instructors, 80.0% indicated development of AWS SENSE aligned curriculum, 80% indicated development of career pathways, 73.3% indicated shared core curriculum, and 46.6% indicated that enhancement/development of the online and blended delivery options had a positive impact on students (see Table 29).

Project Leads were also asked whether various aspects related to the modification/creation of the I-AM curriculum had a positive impact on their *community college*. Almost all (93.4%) Project Leads indicated the updated training facilities had a positive impact on their community college; 86.7% indicated the development of the AWS SENSE aligned curricula, the audited/aligned curricula, and the certification of instructors had a positive impact on the community colleges. Approximately 53.3% of Project Leads indicated that the enhancement/development of the online and blended delivery options and the shared core curriculum had a positive impact on the community colleges (see Table 30). Project Leads were asked about what they learned about the welding curriculum developed and proposed by the I-AM welding subcommittee. Almost all

(93.3%) indicated they learned a great deal about AWS SENSE competencies, AWS qualification requirements, AWS certification requirements, and developing an AWS SENSE aligned program (see Table 31).

All (100%) of the Project Leads indicated that their community college has a transcripting process in place for non-credit to credit at their community college. Approximately 73.3% indicated that a digital literacy curriculum is in place and in use at their community college and that additional online and blended learning options are available at their community college (see Table 32).

Project Leads were asked about interactions with faculty throughout the implementation of the I-AM project at their community college. The majority (86.6%) indicated that their faculty were appropriately certified as required by the I-AM program, 80.0% of Project Leads indicated faculty were kept informed regarding the overall implementation of the I-AM program, 66.7% indicated their faculty were supportive of I-AM efforts, 73.3% indicated faculty were willing to fully implement the I-AM project and 60.0% indicated that chairs/deans were willing to fully implement the I-AM project (see Table 33).

Statewide Management of the I-AM Project. All (100%) Project Leads indicated that they thought the statewide administrative team was effective or very effective in the overall management of the I-AM project, the I-AM statewide project overall, and in communicating with community colleges regarding deliverables. Almost all (93.3%) indicated the overall communication between the Project Leads and the statewide administrative team was effective, 80% indicated that the statewide administrative team was effective in communicating about procurement and budgeting, and about student files. Almost all (86.7%) indicated that the statewide administrative team was effective in communicating about reporting requirement (see. Table 34).

Sustainability of the I-AM Project. Project Leads were asked whether various aspects of the I-AM project will be sustained after the grant ends. The majority (86.6%) indicated that they thought the I-AM project, overall, is sustainable at their community college after the grant ends (see Table 35). All (100%) indicated that the courses developed for I-AM will be sustained, 92.9% indicated that courses revised for I-AM, awards updated/revised for I-AM, and awards developed for I-AM will be sustained after the grant ends on September 30, 2016, and 90.9% indicated that they would continue to sustain the AWS accredited testing facilities at their community college (see Table 36).

Project Leads were asked to identify which components of the I-AM project currently provided are sustainable and which components are not at their community college. Half (50%) of the Project Leads indicated that all aspects of the project are sustainable, 25.0% indicated that the Accredited Testing Facilities (ATFs) for welding are sustainable, while 16.6% indicated NCRC/Career Ready 101 and NIMS are not sustainable (see Table 37).

Strengths. Almost all (93.3%) Project Leads indicated the I-AM grant funding has afforded their community college the opportunity to purchase or update equipment, have up-to-date facilities with equipment representative of what is used in industry, and train existing instructors. Two-thirds (66.7%) of Project Leads indicated that grant funding afforded their community college the opportunity to update/improve their facilities and hire qualified instructors (see Table 38).

The majority (92.9%) of Project Leads indicated that aligning curricula with relevant industry recognized certifications strengthened their program and their ability to offer third party certifications is beneficial to the students at their community college (see Table 39). Approximately 71.7% indicated that intense advising at their community college helped to best match students to a program of study and provide information about career pathways (see Table 39).

The majority (93.3%) of Project Leads indicated that the I-AM project, overall, has had a positive impact on their community college and on their students (see Table 40). Project Leads were asked to describe what the implementation of the I-AM program has meant for their community college. For example, Project Leads indicated that the implementation of I-AM provided opportunities to update their curriculum, to increase advanced manufacturing awareness, to have better relationships with Industry/Employer Partners, purchase equipment, increase enrollment, and increase student placement (see Table 41).

Project Leads were asked to share their thoughts or comments about lessons learned throughout the implementation process. Project Leads reported that CPL processes have greatly improved at their community college, resistance from leadership decreased overtime, and that they would like to have Employer Partners involved more (see Table 42).

The following sections presents tables for: Credit for Prior Learning, Advising and Student Services, Elevate Iowa Marketing Campaign, Your Community College's Regional I-AM Marketing Campaign, Employer Partners, Curriculum, Statewide Management of the I-AM Project, Sustainability of the I-AM Project, and Strengths.

CREDIT FOR PRIOR LEARNING

The following section describes various Credit for Prior Learning (CPL) options available at each community college, changes the community colleges have made related to CPL, and the impact that CPL has had on participating community colleges as a result of the I-AM project.

Table 3.
Did your community college implement any of the following Prior Learning Assessment (PLA) practices after the start of the grant on October 1, 2012?

Statements	*n*	Yes	No	Already had in place
CLEP	15	0.0	20.0	80.0
DANTES DSST	15	6.7	53.3	40.0
Military Transcript Evaluation	15	33.3	6.7	60.0
Portfolio Review	15	33.3	33.3	33.3
ACE	15	6.7	40.0	53.3
Institutional Challenge Exam	15	20.0	46.7	33.3
Advanced Placement Exam	15	13.3	20.0	66.7
License for Credential for Credit	15	40.0	33.3	26.7
Non-Credit to Credit	15	46.7	0.0	53.3
Credit for Experiential Learning	15	40.0	20.0	40.0
Test-Out Exams	15	13.3	0.0	86.7

Note: Values reflect percentages.

Table 4.
Did your community college's CPL policies and/or practices change as a result of the I-AM project? (Select one)

Changes to the CPL Policies/Practices	Percentage
Yes, extensive changes were made	20.0
Yes, moderate changes were made	40.0
Yes, minor changes were made	40.0
No changes were made because all of our CPL policies and/or practices were up to date	0.0
No	0.0

n=15

Table 5.
Please describe the change made to the CPL policies and/or practices at your community college.

Responses	Percentage
Added new pieces	33.3
All policies combined/overhauled	26.7
Non-credit to credit	26.7
Led to development of process	13.3
Mapping of CPL	6.7
Promotion of policy	6.7
Review of process	6.7
Testing procedures enhanced	6.7

Note: Some project leads provided multiple responses.
n=15

Table 6.
Has your community college partnered with or used resources from another Iowa community college to rework your Credit for Prior Learning options?

Response	Percentage
Yes	60.0
No	40.0

n=15

Table 7.
What other community college has your community college partnered with on Credit for Prior Learning? What resources from other community colleges has your community college used to develop/edit/revise/update your Credit for Prior Learning policies?

Responses	Percentage
All Iowa Community Colleges	50.0
Iowa Western Community College	37.5
CLASP	12.5
Don’t remember specific resource	12.5

Note: Some project leads provided multiple responses.
n=8

Table 8.
Please indicate the extent to which you agree with the following statements.

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	I Don't Know
The updated CPL practices have had a positive impact on my community college.	14	0.0	0.0	14.3	50.0	35.7	1
The updated CPL practices have had a positive impact on students.	14	0.0	0.0	35.7	35.7	28.6	1
The updated CPL practices are sustainable after the grant ends on September 30, 2016.	15	6.7	0.0	6.7	20.0	66.7	0

Note: Values reflect percentages.

ADVISING and STUDENT SERVICES

The following section describes responses regarding the use of the Intrusive Advising Model/Approach and student support services to students.

Table 9.
Please indicate the extent to which you agree with each of the following statements. Please click on this link: I-AM Advising Model to review the Intrusive Advising Model/Approach developed by the I-AM Advising and Enrollment committee.

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	I Don't Know
The Intrusive Advising Model/Approach is a useful tool.	14	0.0	0.0	21.4	35.7	42.9	1
The Intrusive Advising Model/Approach has had a positive impact on students.	12	0.0	0.0	25.0	41.7	33.3	3
The Intrusive Advising Model/Approach is cost-effective.	13	7.7	0.0	23.1	53.8	15.4	2
The Intrusive Advising Model/Approach is sustainable.	14	7.1	0.0	21.4	64.3	7.1	1
The Intrusive Advising Model/Approach is looked favorably upon at my community college.	13	15.4	0.0	30.8	30.8	23.1	2

Note: Values reflect percentages.

Table 10.
Please indicate the usefulness of various student services that are provided by your community college listed below.

		Does your community college provide these services?		*In your opinion, how useful have these services been for students?*				
Resources	*n*	Yes	No	Not at All Useful	Some-what Useful	Useful	Very Useful	Not Prov-ided
KeyTrain/Career Ready 101	15	86.7	13.3	0.0	40.0	13.3	33.3	13.3
NCRC	15	100.0	0.0	13.3	26.7	26.7	33.3	0.0
Credit for Prior Learning	15	100.0	0.0	0.0	26.7	26.7	46.7	0.0
Third Party Certifications	15	100.0	0.0	0.0	6.7	40.0	53.3	0.0
Career Pathways	15	93.3	6.7	0.0	13.3	26.7	53.3	6.7

Note: Values reflect percentages.

Table 11.
Please indicate the extent to which you agree with the following statements.

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	I Don't Know
The Career Navigator/Success Coach/Advisor has had a positive impact on my community college.	15	0.0	0.0	26.7	20.0	53.3	0
The Career Navigator/Success Coach/Advisor has had a positive impact on students at my community college.	15	0.0	0.0	26.7	20.0	53.3	0
As a result of the I-AM project, students have received enhanced support services.	15	0.0	0.0	13.3	33.3	53.3	0
Students benefitted from their interactions with Navigators/Career Coaches/Advisors/ Success Coaches.	15	0.0	0.0	6.7	26.7	66.7	0

Note: Values reflect percentages.

ELEVATE IOWA MARKETING CAMPAIGN

The following section describes results from questions regarding the Elevate Iowa (statewide) marketing campaign, its effect on the community colleges, and community colleges' satisfaction with the campaign.

Table 12.
The Elevate Iowa marketing campaign conducted by the lead marketing team at DMACC has had a positive impact on…

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	I Don't Know
Recruitment at my community college	13	0.0	0.0	46.2	23.1	30.8	2
Enrollment at my community college	13	0.0	0.0	61.5	15.4	23.1	2
Retention at my community college	12	0.0	8.3	50.0	16.7	25.0	3
Awareness of Advanced Manufacturing at my community college	14	0.0	0.0	0.0	57.1	42.9	1
My community college overall	13	0.0	0.0	46.2	23.1	30.8	2

Note: Values reflect percentages.

Table 13.
Overall, how satisfied has your community college been with the Elevate Iowa marketing efforts?

Satisfaction	Percentage
Very Dissatisfied	0.0
Dissatisfied	0.0
Neither Satisfied nor Dissatisfied	33.3
Satisfied	33.3
Very Satisfied	33.3

n=15

Table 14.
If your community college were to participate in a similar statewide effort (e.g., Iowa's Information Technology, Healthcare, Utilities, and Manufacturing/IHUM) in the future, what changes or improvements to a statewide marketing campaign would you make?

Responses	Percentage
Make sure everyone is aware of efforts	27.3
Active involvement	18.2
Build on the Elevate campaign	18.2
Expand outreach to schools/non-ABI employers	18.2
More visibility in rural areas	18.2
Documentation needs to be better organized	9.1
Require CCs to hired coordinator	9.1

Note: Some project leads provided multiple responses.
n=11

YOUR COMMUNITY COLLEGE'S REGIONAL I-AM MARKETING CAMPAIGN

This section centers on the community colleges' regional marketing campaigns and how those campaigns affected the I-AM project at each community college.

Table 15.
Over the past two to three years, how active has your community college been in marketing and promoting the Iowa Advanced Manufacturing (I-AM) programs your community college provides?

Activity	Percentage
Not at All Active	6.7
Slightly Active	0.0
Somewhat Active	6.7
Moderately Active	33.3
Very Active	53.3

n=15

Table 16.
In the following section, you are asked to indicate your community college's frequency of use of various marketing mediums for Advanced Manufacturing programs. In the past two years, did your community college use any of the following marketing mediums to advertise the I-AM program?

Marketing Mediums	*n*	Yes	No	I Don't Know
Elevate Iowa	15	86.7	6.7	6.7
Television	15	53.3	33.3	13.3
Radio	15	93.3	6.7	0.0
Social Media (e.g., Facebook, Twitter, YouTube)	15	86.7	6.7	6.7
Newspaper	15	66.7	20.0	13.3
Flyer/Brochures	15	93.3	6.7	0.0
State Fair	15	66.7	6.7	26.7
Other (please specify)	15	40.0	20.0	40.0

Note: Values reflect percentages.

Responses from the "Other" choice:
Billboards (2)
Local Fairs (1)
Sector Board (1)
Workshops (1)

Table 17.
Please indicate the extent to which you agree with the following statements. The Advanced Manufacturing marketing campaign conducted by my community college has had a positive impact on recruitment efforts of…

Target Groups	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Underemployed	15	6.7	0.0	26.7	26.7	40.0
Unemployed	15	6.7	0.0	33.3	33.3	26.7
Underrepresented Populations (e.g., minorities, women)	15	6.7	0.0	46.7	20.0	26.7
Veterans	15	6.7	0.0	53.3	26.7	13.3
Students Overall	15	6.7	0.0	13.3	53.3	26.7
Overall Recruiting	15	6.7	0.0	13.3	46.7	33.3

Note: Values reflect percentages.

Table 18.
Please indicate the extent to which you agree with the following statements. The Advanced Manufacturing marketing campaign conducted by my community college has had a positive impact on enrollment of…

Target Groups	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Underemployed	15	6.7	0.0	33.3	40.0	20.0
Unemployed	15	6.7	0.0	26.7	46.7	20.0
Underrepresented Populations (e.g., minorities, women)	15	6.7	0.0	40.0	33.3	20.0
Veterans	15	6.7	6.7	46.7	33.3	6.7
Students Overall	15	6.7	6.7	6.7	60.0	20.0
Overall Enrollment	15	6.7	0.0	20.0	53.3	20.0

Note: Values reflect percentages.

Table 19.
Please indicate the extent to which you agree with the following statements. The Advanced Manufacturing marketing campaign conducted by my community college has had a positive impact on retention of…

Target Groups	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Underemployed	15	6.7	0.0	53.3	26.7	13.3
Unemployed	15	6.7	0.0	46.7	33.3	13.3
Underrepresented Populations (e.g., minorities, women)	15	6.7	0.0	53.3	26.7	13.3
Veterans	15	6.7	0.0	60.0	20.0	13.3
Students Overall	15	6.7	0.0	40.0	40.0	13.3
Overall Retention	15	6.7	0.0	46.7	33.3	13.3

Note: Values reflect percentages.

Table 20.
The following statements ask about the impact the I-AM project has had on your community college. Please indicate the extent to which you agree with each of the following statements. As a result of the I-AM project…

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
We have had increased success in attracting students overall.	15	0.0	0.0	20.0	73.3	6.7
We have had success in attracting displaced, TAA eligible, and/or unemployed, underemployed workers.	15	0.0	20.0	26.7	40.0	13.3
We have expanded efforts to market to the community.	15	0.0	6.7	0.0	66.7	26.7
The regional marketing plan has had an overall positive impact on my community college.	15	6.7	0.0	13.3	66.7	13.3

Note: Values reflect percentages.

Table 21.
In what other ways has your community college's marketing of the Advanced Manufacturing programs impacted your community college?

Responses	Percentage
Increased public awareness	41.7
Do things that otherwise would not have been done	25.0
Brought light to program improvements	16.7
Enrolling students	16.7
Nothing has been done by marketing department	8.3
Relationship building with employers	8.3

Note: Some project leads provided multiple responses.
n=12

Table 22.
How likely is your community college to continue to market your Advanced Manufacturing program after the grant ends on September 30, 2016?

Likeliness	Percentage
Very Unlikely	13.3
Unlikely	6.7
Undecided	6.7
Likely	33.3
Very Likely	40.0

n=15

EMPLOYER PARTNERS

The following section describes opportunities provided by I-AM Employer Partners to students and any activities they have engaged in with participating community colleges.

Table 23.
How involved have your community college's employer partners been in any of the following Iowa Advanced Manufacturing activities at your community college?

Activities	*n*	No Involvement	Little Involvement	Some Involvement	Frequent Involvement	I Don't Know
Participation in Regional Sector Board	12	0.0	8.3	25.0	66.7	3
Participation in Local Advisory Board	15	0.0	20.0	73.3	0.0	0
Participation in Elevate Iowa	13	0.0	15.4	53.8	30.8	2
Provides Curriculum Input (not a part of the Sector and Advisory Boards)	15	0.0	13.3	46.7	40.0	0
Identification of Occupational Needs	15	0.0	0.0	26.7	73.3	0
Provides access to company/business facilities for project meetings/training	14	0.0	0.0	35.7	64.3	1
Identification of potential program instructors and faculty	15	0.0	6.7	60.0	33.3	0
Donation of equipment to your community college	15	13.3	6.7	46.7	33.3	0
Sends employees to the community college for specialized or incumbent training	15	0.0	0.0	40.0	60.0	0

Note: Values reflect percentages.

Table 24.
Do your employer partners provide any of the following opportunities to students participating in the Advanced Manufacturing program?

Opportunities	*n*	Yes	No	I Don't Know
Internships	15	80.0	13.3	6.7
Apprenticeships	15	20.0	53.3	26.7
Mentoring	15	53.3	26.7	20.0
Tours	15	100.0	0.0	0.0
Resume Review	15	26.7	40.0	33.3
Mock Interviews	15	46.7	33.3	20.0
Pay for Certification Fees/ Membership Dues	15	26.7	46.7	26.7
Scholarships/Tuition/Tuition Reimbursement	15	73.3	13.3	13.3
Hire students prior to graduation	15	80.0	13.3	6.7
Referring unsuccessful applicants to Advanced Manufacturing program	15	33.3	13.3	53.3
Flexibility to incumbent workers	15	60.0	0.0	40.0
Company Sponsored Training	15	93.3	0.0	6.7
Career Fairs	15	93.3	0.0	6.7

Note: Values reflect percentages.

Table 25.
Do you feel your community college has made a significant impact/has met expectations in meeting industry needs in each of the following areas?

Statements	*n*	Far Short of Expectations	Short of Expectations	Meets Expectations	Exceeds Expectations	Far Exceeds Expectations	I Don't Know
Progress in producing enough workers to meet hiring needs/demand for workers	14	7.1	35.7	35.7	21.4	0.0	1
Progress in producing quality workers to meet hiring needs/demand for workers	14	0.0	0.0	28.6	50.0	21.4	1
Producing students that have the technical skills/abilities (e.g., knowledge of equipment) required to begin working with minimal training or guidance	15	0.0	6.7	20.0	46.7	26.7	0
Producing students that have the soft skills (e.g., communication skills, problem solving) required to begin working at an employer partner's company	15	0.0	20.0	60.0	20.0	0.0	0
The Advanced Manufacturing project has succeeded in providing opportunities for upskilling the workforce	15	0.0	6.7	26.7	53.3	13.3	0

Note: Values reflect percentages.

Table 26.
Please describe how the preparation of skilled workers by your community college has met industry needs/expectations as a result of the I-AM program.

Responses	Percentage
Employers are investing time	38.5
Improved workers' skills	30.8
Added third party credentials	23.1
Modified structure of program	23.1
Output of number of students	23.1
Having difficulty finding students	15.4
Upgrading of equipment	7.7
We are behind	7.7

Note: Some project leads provided multiple responses.
n=13

Table 27.
Departments/programs at my community college have developed strong relationships or have enhanced existing relationships with the following since the start of the I-AM program on October 1, 2012.

Groups	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Industry/Employer Partners	15	0.0	0.0	0.0	60.0	40.0
Business Associations	15	0.0	0.0	13.3	66.7	20.0
Workforce Development	15	0.0	0.0	6.7	40.0	53.3

Note: Values reflect percentages.

Table 28.
Please describe how the various relationships between your community college and employer partners have been strengthened.

Responses Provided	Percentage
Employers are more involved/very active	81.8
Career Navigators talk to employers	9.1
Employers encourage professional development	9.1
Frequent meetings to address needs	9.1
Statewide marketing campaign	9.1

Note: Some project leads provided multiple responses.
n=11

CURRICULUM

The following section reflects responses regarding the modification/creation of the I-AM curriculum and its impact on the community college and the students.

Table 29.
Please indicate the extent to which you agree that each of the following had a positive impact on STUDENTS.

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	I Don't Know
Development of AWS SENSE Aligned Curricula	15	0.0	0.0	20.0	26.7	53.3	0
Audited/Aligned Curricula with Other Third-Party Credentials	15	0.0	0.0	13.3	46.7	40.0	0
Certification of Instructors	14	0.0	0.0	14.3	42.9	42.9	1
Update of Training Facilities	15	0.0	0.0	6.7	26.7	66.7	0
Enhancement/ Development of Online and Blended Delivery Options	15	6.7	6.7	40.0	33.3	13.3	0
Shared Core Curriculum	15	6.7	0.0	20.0	53.3	20.0	0
Development of Career Pathways	15	6.7	0.0	13.3	53.3	26.7	0
Ongoing Review of the Curriculum	15	6.7	0.0	6.7	53.3	33.3	0

Note: Values reflect percentages.

Table 30.
Please indicate the extent to which you agree that each of the following had a positive impact on your COMMUNITY COLLEGE.

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	I Don't Know
Development of AWS SENSE Aligned Curricula	15	0.0	0.0	13.3	46.7	40.0	0
Audited/Aligned Curricula with Other Third-Party Credentials	15	0.0	0.0	13.3	46.7	40.0	0
Certification of Instructors	15	0.0	6.7	6.7	46.7	40.0	0
Update of Training Facilities	15	0.0	0.0	6.7	26.7	66.7	0
Enhancement/ Development of Online and Blended Delivery Options	15	6.7	6.7	33.3	40.0	13.3	0
Shared Core Curriculum	15	6.7	0.0	40.0	40.0	13.3	0
Development of Career Pathways	14	7.1	0.0	14.3	64.3	14.3	1
Ongoing Review of the Curriculum	15	6.7	0.0	20.0	53.3	20.0	0

Note: Values reflect percentages.

Table 31.
Please indicate the extent to which you agree with each of the following statements regarding the welding curriculum developed by the I-AM welding subcommittee. I learned a great deal about…

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
AWS SENSE competencies	15	0.0	0.0	6.7	46.7	46.7
AWS Qualification requirements	15	0.0	0.0	6.7	40.0	53.3
AWS Certification requirements	15	0.0	0.0	6.7	40.0	53.3
Developing an AWS SENSE aligned program	15	0.0	0.0	6.7	60.0	33.3
Writing course competencies for welding	15	0.0	0.0	33.3	40.0	26.7
Determining appropriate lecture/lab ratios and credit hours for welding courses	15	0.0	0.0	40.0	26.7	33.3

Note: Values reflect percentages.

Table 32.
Please indicate the extent with which you agree with the following statements.

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
There is a transcripting process in place for non-credit to credit at my community college.	15	0.0	0.0	0.0	60.0	40.0
Digital literacy curriculum is in place and is use at my community college.	15	6.7	0.0	20.0	53.3	20.0
Additional online and blended learning options are available at my community college due to the Advanced Manufacturing program.	15	6.7	6.7	13.3	66.7	6.7

Note: Values reflect percentages.

Table 33.
Please indicate the extent to which you agree with the following statements regarding the Advanced Manufacturing faculty at your community college.

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
The I-AM instructors were appropriately certified ay my community college.	15	0.0	0.0	13.3	53.3	33.3
Faculty were kept informed regarding the overall implementation of the I-AM program (e.g., curriculum development, new hires) at my community college.	15	0.0	13.3	6.7	53.3	26.7
Faculty are supportive of Advanced Manufacturing efforts at my community college.	15	6.7	6.7	20.0	40.0	26.7
As a result of the I-AM project, our faculty were willing to fully implement the program.	15	6.7	6.7	13.3	40.0	33.3
As a result of the I-AM project, our chair/dean was willing to fully implement the program.	15	6.7	6.7	26.7	26.7	33.3

Note: Values reflect percentages.

STATEWIDE MANAGEMENT OF THE I-AM PROJECT

The following describes Project Leads' perceptions regarding the effectiveness of the statewide management of the I-AM project.

Table 34.
Please rate the effectiveness of…

Statements	*n*	Very Ineffective	Ineffective	Somewhat Ineffective	Somewhat Effective	Effective	Very Effective
The statewide administrative team in the overall management of the I-AM project	15	0.0	0.0	0.0	0.0	26.7	73.3
The I-AM statewide project overall	15	0.0	0.0	0.0	0.0	26.7	73.3
The overall communication between you and the statewide administrative team	15	0.0	0.0	0.0	6.7	33.3	60.0
Specific communication regarding procurement and budgeting	15	0.0	6.7	0.0	13.3	20.0	60.0
Specific communication regarding student files	15	0.0	0.0	0.0	20.0	26.7	53.3
Specific communication regarding reporting	15	0.0	0.0	0.0	13.3	26.7	60.0
Specific communication regarding deliverables	15	0.0	0.0	0.0	0.0	46.7	53.3

Note: Values reflect percentages.

SUSTAINABILITY OF THE I-AM PROJECT

The following section describes Project Leads' perceptions regarding the sustainability of various aspects of the I-AM project after the grant ends on September 30, 2016.

Table 35.
The I-AM program at my community college is sustainable after the grant ends.

Agreement	Percentage
Strongly Disagree	13.3
Disagree	0.0
Neither Agree nor Disagree	0.0
Agree	53.3
Strongly Agree	33.3

n=15

Table 36.
Will your community college continue to offer (sustain) any of the following I-AM signature program components after the grant ends on September 30, 2016?

Components	*n*	Yes	Possibly	No	I Don't Know	Not Applicable
Courses revised for I-AM	14	92.9	7.1	0.0	0	1
Courses developed for I-AM	14	100.0	0.0	0.0	0	1
Awards updated/revised (e.g., certificates, diplomas, degrees) for I-AM	14	92.9	7.1	0.0	1	0
Awards developed (e.g., certificates, diplomas, degrees) for I-AM	14	92.9	7.1	0.0	1	0
AWS Accredited Testing Facilities	11	90.9	9.1	0.0	1	3

Note: Values reflect percentages.

Table 37.
Please describe the aspects of the I-AM program at your community college that are and are not sustainable after the grant ends on September 30, 2016. How will the community college ensure that the program remains up-to-date and viable.

Responses Provided	Percentage
All aspects are sustainable	50.0
ATFs are sustainable	25.0
Community college has not been a supporter of I-AM	8.3
Enrollment will determine if the program continues	8.3
Getting students to ATF may be a problem	8.3
Job duties will change	8.3
NCRC/Career Ready 101 not sustainable	8.3
NIMS not sustainable	8.3

Note: Some project leads provided multiple responses.
n=12

STRENGTHS

The following section describes Project Leads' perceptions regarding strengths of the I-AM project, what the projects has meant to the community colleges and thoughts about lessons learned.

Table 38.
Please indicate the extent to which you agree with each of the following statements. The I-AM grant funding has afforded us the opportunity to…

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Update/improve facilities	15	0.0	0.0	33.3	26.7	40.0
Purchase or update equipment	15	0.0	0.0	6.7	33.3	60.0
Have up-to-date facilities with equipment representative of what is used in industry	15	0.0	0.0	6.7	40.0	53.3
Hire qualified instructors	15	13.3	6.7	13.3	26.7	40.0
Train existing instructors	15	6.7	0.0	0.0	53.3	40.0

Note: Values reflect percentages.

Table 39.
Please indicate the extent to which you agree with each of the following statements about the I-AM program at your community college.

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Not Applicable	I Don't Know
Aligning curricula with relevant industry recognized certifications strengthened our program.	14	0.0	0.0	7.1	42.9	50.0	0	1
Our ability to offer 3rd party certifications is beneficial to students at my community college.	14	0.0	0.0	7.1	35.7	57.1	0	1
Intense advising at my community college has helped to best match students to a program of study and educate them regarding career pathways.	14	0.0	0.0	28.6	35.7	35.7	0	1

Note: Values reflect percentages.

Table 40.
Please indicate the extent to which you agree with the following statements.

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Overall, the Advanced Manufacturing program has had a positive impact on my community college.	15	0.0	0.0	6.7	53.3	40.0
Overall, the Advanced Manufacturing program has had a positive impact on students.	15	0.0	6.7	0.0	40.0	53.3

Note: Values reflect percentages.

Table 41.
Please describe what the implementation of the I-AM program has meant for your community college.

Responses	Percentage
Updating of curriculum	38.5
More advanced manufacturing awareness	26.7
Better industry relationships	15.4
Purchasing of equipment	15.4
Higher enrollment	7.7
Increased student job placement	7.7
People at CC did not want to comply with deliverables	7.7
Positive	7.7
Renovations	7.7
Successful and impactful project	7.7
The partnership with all the community colleges	7.7
We would not have the program	7.7

Note: Some project leads provided multiple responses.
n=13

Table 42.
Please share any thoughts or comments about lessons learned with regards to the following. What worked? Are there things you would change (e.g. credit for prior learning, curriculum, employer partner interactions, other)?

Responses	Percentage
CPL has greatly improved	57.1
After a while, leadership stopped resisting	14.3
CPL collaboration	14.3
Curriculum was carefully reviewed	14.3
DOL should not give CC any more money	14.3
Would like to have more employer involvement	14.3

Note: Some project leads provided multiple responses.
n=7

Appendix K:

Marketing Survey Report: Fall 2014

METHODOLOGY

A marketing survey was developed to assess the impact regional and statewide marketing campaign on the implementation of the I-AM project. The survey was distributed by marketing staff at each participating community college in August 2014 to 41 individuals with direct knowledge of marketing at their respective community colleges. A total of 20 individuals responded (response rate = 49.0%) representing 13 of the 15 community colleges (see Table 1).

Table 1.
Which community college do you work for?

Community College	Number of Respondents
Des Moines Area Community College	0
Eastern Iowa Community Colleges	2
Hawkeye Community College	3
Iowa Central Community College	1
Indian Hills Community College	0
Iowa Lakes Community College	3
Iowa Valley Community College District	1
Iowa Western Community College	1
Kirkwood Community College	2
North Iowa Area Community College	1
Northeast Iowa Community College	1
Northwest Iowa Community College	1
Southeastern Community College	1
Southwestern Community College	1
Western Iowa Tech Community College	1

n=19

Approximately half (52.6%) of the respondents indicated that they served as directors of marketing at their community college, 26.3% were project managers/leads, 10.5% indicated they were a Vice President or Director at their community college (see Table 2). One-third (31.6%) of respondents indicated they were involved all of the time with their community college's marketing campaign, 21.1% were often involved, 42.1% were sometimes involved and 5.3% indicated that they were rarely involved (see Table 3).

Table 2.
What is your title/role as part of your community college's marketing campaign for the Advanced Manufacturing grant?

Responses	Percentage
Marketing Coordinator/Director/Assistant	52.6
Project Coordinator/Lead	26.3
Vice President/Director at community college	10.5
Grant Writer	5.3
Military Outreach Consultant	5.3

n=19

Table 3.
How involved are you in your community college's marketing campaign for the Advanced Manufacturing grant?

Involvement	Percentage
Not At All Involved	0.0
Rarely Involved	5.3
Sometimes Involved	42.1
Often Involved	21.1
Involved All Of The Time	31.6

n=19

Regional Marketing Campaign. Marketing Survey participants were asked about their community college's marketing campaign including how effective their regional marketing campaign has been, which audiences (e.g., underemployed, veterans) are targeted, their thoughts about how their marketing efforts can be improved, how they are spending their allocated Department of Labor (DOL) marketing money, and whether the marketing efforts to various target groups has been effective.

Statewide Marketing Campaign. Marketing respondents were asked about the statewide, Elevate Iowa, marketing campaign. In particular, respondents were asked whether the Elevate Iowa marketing campaign applied to various target groups, its effectiveness in marketing to the targeted groups, effectiveness of the overall statewide marketing efforts, and grant activities related to the Elevate Iowa campaign.

In addition, Marketing Survey participants were asked about the resources provided by the Lead Marketing Team at Des Moines Area Community College, and whether there was anything the Lead Marketing Team could do to help the community colleges with their marketing efforts.

Finally, the Marketing Survey participants were asked about any barriers they have encountered in using the DOL marketing money. The survey participants were asked to list what barriers they have encountered and how the funds allocated for marketing efforts have helped their community college. At the end, the participants were asked if there were any comments they would like to add to the discussion on the regional and statewide marketing campaigns.

Implementation Analysis Research Question

Responses to the Marketing Survey partially answers one of following the TAACCCT grant required research questions:

- How were programs and program design improved or expanded using grant funds?

Grant funds were used to market the I-AM program at both the regional and statewide level. In particular, responses provide information about the impact of these marketing campaigns had on participating community colleges in the areas of recruitment, enrollment, and retention.

RESULTS

Regional Marketing Campaign. Overall, over half (63.2%) of respondents felt that their community college's regional marketing efforts were effective, while 26.3% felt that their community college's efforts were neither effective nor ineffective (see Table 4). Respondents were asked to share their thoughts on how their regional marketing efforts could be improved. A few respondents suggested making changes in attitude at the college level, having more time/money/staff, and marketing the signature programs through social media (see Table 5).

Respondents indicated that their marketing campaigns were effective in targeting potential students, hosting career fairs and local events, and meeting industry's demand (see Table 6). Respondents indicated that their community college targeted underemployed, underrepresented populations, unemployed, and veterans in their marketing efforts (see Table 7) and that grant marketing funds were spent on each of these groups (see Table 8). Overall, respondents were somewhat split on whether their community college's regional marketing efforts were effective with 43.7% indicating that it was effective or very effective and 37.5% indicating that they were neutral on whether or not efforts were effective. Only a small percentage (18.8%) of the respondents thought that marketing efforts were not effective in targeting the various groups (e.g., underemployed, underrepresented; see Table 9).

The community colleges are spending the DOL marketing money on a variety of marketing mediums to target specific populations. For example, 93.7% used flyers/brochures to market their program, 87.5% advertised through social media (e.g., Facebook, Twitter) and the radio, 68.7% advertised on television, 56.2% advertised their program through Elevate Iowa and newspapers, and 25% indicated that they advertised their program at the Iowa State Fair (see Table 10). In general, respondents (50%-68.7%) thoughts that their marketing efforts using radio, flyers, social media, and television were effective or very effective in recruiting students. In contrast, only one-third (37.5%) of the respondents thought newspapers were effective in recruiting students (see Table 10).

Statewide Marketing/Elevate Iowa Campaign. The respondents were asked about the Elevate Iowa statewide marketing campaign. Overall, the majority (62.5% - 81.3%) of respondents indicated that the Elevate Iowa campaign was applicable to the target groups (e.g., underemployed, underrepresented; see Table 11) and 62.5%-68.8% of respondents indicated that they thought the Elevate Iowa campaign was effective in marketing to these groups (see Table 12). Respondents were asked to describe any Elevate Iowa activities that their community college participated in. Community colleges participated in coordinating efforts, marketing efforts, and fairs (see Table 13). Respondents were asked to rate the effectiveness of statewide marketing efforts. Slightly less than half (43.8%) of respondents indicated that statewide marketing efforts were effective while 50% of the respondents were neutral in their rating of statewide marketing's effectiveness (see Table 14). Some respondents indicated that the statewide marketing campaign was effective because the team was knowledgeable and that there was greater media coverage (see Table 15). When asked how these marketing efforts could be

improved, respondents indicated that efforts could be improved by engaging in local advertising, having less restrictions on spending the DOL marketing money, and better communication (see Table 16).

The various grant activities completed under the Elevate Iowa campaign included the coordination of marketing efforts, career fairs, and increased marketing efforts.

Overall, respondents agreed that the Lead Marketing Team at Des Moines Area Community College (DMACC) ensured that participants were aware of marketing requirements, providing necessary resources, and were available to answer questions (see Table 17). Most of the respondents indicated that the Lead Marketing Team was thorough and did not need to provide any additional help beyond what was already provided (see Table 18). However, among those respondents that indicated that there were more ways to help, they indicated that the lead marketing team could help with dealing with the money restrictions, branding, Elevate Iowa materials, and suggested that webinars be offered at more or different times than they currently are (see Table 19).

Finally, the respondents were asked about any barriers they have encountered during their marketing campaigns. Six responded that they have encountered barriers (see Table 20), including dealing with the procurement requirements, understanding how to spend the marketing budget, and waiting on orders (see Table 21). Overall, respondents indicated that the DOL marketing money has impacted the community colleges for the better; they are able to promote the signature programs directly, receive extra funds and additional resources that come with a DOL TAACCCT grant, and they are able to take part in statewide activities (see Table 22).

The following section presents results for the regional marketing campaign, Statewide/Elevate Iowa campaign, resources, and barriers.

YOUR COMMUNITY COLLEGE'S MARKETING CAMPAIGN

This section gauges the effectiveness of community college regional marketing as well as areas that need improvement.

Table 4.
How effective are your community college's regional marketing efforts in recruiting students?

Effectiveness	Percentage
Very Ineffective	0.0
Ineffective	10.5
Neither Effective Nor Ineffective	26.3
Effective	63.2
Very Effective	0.0

n=19

Table 5.
How could your regional marketing efforts be improved?

Responses	Percentage
Change attitudes at college level	16.7
More time/money/staff	16.7
Highlight training/retraining up to the national level	16.7
Market programs	16.7
Work closer with IowaWorks	16.7
Social media marketing	16.7

n=6

Table 6.
In what ways is your community college's regional marketing campaign effective?

Responses	Percentage
Target potential students	70.0
Not targeting I-AM students specifically	30.0
Career Fairs/local events	30.0
In-demand industry	20.0
Increase in inquires	10.0

Note: Some respondents provided multiple responses.
n=10

Table 7.
Which groups are your target audiences for your marketing campaign? (Select all that apply)

Target Groups	Percentage
Underemployed	87.5
Underrepresented populations (e.g., minorities, women)	81.3
Unemployed	93.8
Veterans	81.3
Other (please specify):	37.5

Note: The percentages do not add up to 100%.
n=16
Responses from the "Other" choice: Graduating seniors (1)
Youth/parents (1)
Non 4 year students (1)
Undeclared students (1)
Up-skilling (1)

Table 8.
What percentage of your community college's DOL grant money for marketing is spent on each of the following groups? (Total must equal 100)

DOL Grant Categories	Minimum	Maximum	Average Percentage
Underemployed	0.0	100.0	30.6
Underrepresented populations (e.g., minorities, women)	0.0	30.0	17.2
Unemployed	0.0	50.0	24.4
Veterans	0.0	25.0	13.8
Other	0.0	100.0	15.0

n=16

Table 9.
How effective is your community college's ability to market to the different groups with DOL grant money received as part of the Advanced Manufacturing grant?

Statements	*n*	Very Ineffective	Ineffective	Neither Effective nor Ineffective	Effective	Very Effective
Underemployed	16	0.0	18.8	37.5	37.5	6.2
Underrepresented populations (e.g., minorities, women)	16	0.0	18.8	37.5	43.7	0.0
Unemployed	16	0.0	18.8	25.0	50.0	6.2
Veterans	16	0.0	18.8	50.0	31.2	0.0

Note: Values reflect percentages.

Table 10.
In the following section, you are asked to indicate your community college's frequency of use and effectiveness of various marketing mediums.

		In the past year, how often did your community college use each of the following marketing mediums?				*In the past year, how effective have each of the following marketing mediums been in recruiting students?*				
Marketing Mediums	*n*	Never	Rarely	Some-times	Often	Very Ineffective	Ineffective	Neither Effective nor Ineffective	Effective	Very Effective
Television	16	25.0	6.3	56.2	12.5	0.0	12.5	37.5	50.0	0.0
Radio	16	6.3	6.3	37.4	50.0	0.0	6.3	25.0	56.2	12.5
Social Media (e.g., Facebook, Twitter)	16	0.0	12.5	50.0	37.5	0.0	6.2	31.3	61.5	0.0
Elevate Iowa	16	18.8	25.0	37.4	18.8	6.3	18.7	50.0	18.7	6.3
State Fair	16	50.0	25.0	18.8	6.2	25.0	6.3	56.1	6.3	6.3
Newspapers	16	12.5	31.3	31.2	25.0	6.3	18.7	37.5	37.5	0.0
Flyers /Brochures	16	0.0	6.3	50.0	43.7	0.0	6.3	31.3	43.7	18.7
Other	16	43.7	3.6	31.2	18.8	18.7	0.0	50.0	31.3	0.0

Note: Values reflect percentages.

Responses from the "Other" choice:
Billboards (1)
E-marketing (1)
Website (1)
Special events (1)

ELEVATE IOWA CAMPAIGN

This section focuses on the Elevate Iowa campaign and the extent of effectiveness concerning specifically targeted groups state-wide. This section also includes suggestions provided by respondents on improving marketing efforts.

Table 11.
How applicable is the Elevate Iowa campaign for each of the following target groups?

Target Groups	*n*	Very Inapplicable	Inapplicable	Neither Applicable nor Inapplicable	Applicable	Very Applicable
Underemployed	16	0.0	6.2	12.5	62.5	18.8
Underrepresented populations (e.g., minorities, women)	16	0.0	6.2	18.8	56.2	18.8
Unemployed	16	0.0	6.2	12.5	62.5	18.8
Veterans	16	0.0	12.5	25.0	50.0	12.5

Note: Values reflect percentages.

Table 12.
How effective is Elevate Iowa's ability to market to each of the following groups?

Target Groups	*n*	Very Ineffective	Ineffective	Neither Effective nor Ineffective	Effective	Very Effective
Underemployed	16	0.0	6.2	25.0	56.3	12.5
Underrepresented populations (e.g., minorities, women)	16	0.0	6.2	31.3	50.0	12.5
Unemployed	16	0.0	6.2	25.0	56.3	12.5
Veterans	16	0.0	6.2	31.3	50.0	12.5

Note: Values reflect percentages.

Table 13.
Please describe your grant activities as part of the Elevate Iowa campaign.

Responses	Percentage
Coordinating efforts	43.8
Fairs	31.3
Marketing efforts	31.3
Haven't really started	6.3
Local employer meetings	6.3
Recruitment	6.3

Note: Some respondents provided multiple responses.
n=16

Table 14.
Overall, how effective are the statewide marketing efforts?

Effectiveness	Percentage
Very Ineffective	6.3
Ineffective	0.0
Neither Effective Nor Ineffective	50.0
Effective	43.8
Very Effective	0.0

n=16

Table 15.
In what ways is the statewide marketing campaign effective?

Responses	Percentage
Increased knowledge	57.1
Media coverage	57.1
Events	14.3

Note: Some respondents provided multiple responses.
n=7

Table 16.
How could the statewide marketing efforts be improved?

Responses	Percentage
Local advertising	37.5
Better communication	25.0
Less restriction	25.0
Changing attitudes	12.5
Less focus on Des Moines	12.5
Leverage community college brand recognition	12.5
Money	12.5

Note: Some respondents provided multiple responses.
n=8

RESOURCES

The Lead Marketing Team at DMACC is the focus of the following section, respondents' perceptions on the team's effectiveness in their role, and in providing information and assistance on marketing for the Advanced Manufacturing program.

Table 17.
The following statements are asking you about the Lead Marketing Team at DMACC and their role in providing you information about marketing for the Advanced Manufacturing Grant. The Lead Marketing Team at DMACC…

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Total Agree
makes sure I am aware of marketing requirements of the grant.	16	0.0	0.0	12.5	50.0	37.5	87.5
provides the necessary resources.	16	6.2	0.0	25.0	43.8	25.0	68.8
is available to answer my questions regarding requirements.	16	0.0	0.0	18.8	43.7	37.5	81.2
is available to answer my questions regarding resources.	16	0.0	0.0	18.8	50.0	31.2	81.2

Note: Values reflect percentages.

Table 18.
Is there more the Lead Marketing Team at DMACC can do to help you with your marketing efforts?

Response	Percentage
Yes	25.0
No	75.0

n=16

Table 19.
What else can the Leads Marketing Team at DMACC do to help you with your marketing efforts?

Responses	Percentage
Money restrictions	50.0
Answer questions about branding	25.0
More Elevate materials	25.0
Offering webinars at more/different times	25.0

Note: Some respondents provided multiple responses.
n=4

BARRIERS

This section investigates any barriers participants face when using/spending DOL money set aside for marketing. The participants were also asked a question regarding how the DOL marketing funds have impacted their community college.

Table 20.
Have you encountered any barriers in using/spending the DOL money set aside for marketing?

Response	Percentage
Yes	37.5
No	62.5

n=16

Table 21.
What barriers have you encountered in using/spending the DOL marketing money?

Responses	Percentage
Procurement requirements	66.7
DOL and Open Source statements	16.7
Nobody knows how to spend our marketing budget	16.7
Waiting on orders	16.7

Note: Some respondents provided multiple responses.
n=6

Table 22.
How has the DOL marketing money impacted your community college?

Responses	Percentage
Promote signature programs	43.8
Extra funds/additional resources	25.0
Don't know	18.8
Statewide activities	12.5
You have to spend the money	6.3
Not worth the headache	6.3

Note: Some respondents provided multiple responses.
n=16

Table 23.
Any comments on the regional or statewide marketing campaigns you would like to add?

Responses	Percentage
Outreach outside of Des Moines	40.0
Want fewer hoops to jump through	40.0
Issues with marketing department	20.0
Staff is always helpful and accommodating	20.0

Note: Some respondents provided multiple responses.
n=5

Appendix L:

Marketing Committee Survey Report: Fall 2015

METHODOLOGY

A marketing survey was developed to assess the impact the regional and statewide marketing campaign had on the implementation of the I-AM project. The survey was distributed to 24 individuals with direct knowledge of I-AM marketing at their respective community colleges in October, 2015. A total of 17 individuals responded (response rate = 70.8%) representing 12 of the 15 community colleges (see Table 1).

Table 1.
Which community college are you associated with?

Community College	Number of Respondents
Des Moines Area Community College	0
Eastern Iowa Community College	2
Hawkeye Community College	1
Iowa Central Community College	3
Indian Hills Community College	1
Iowa Lakes Community College	1
Iowa Valley Community College District	0
Iowa Western Community College	1
Kirkwood Community College	0
North Iowa Area Community College	1
Northeast Iowa Community College	1
Northwest Iowa Community College	1
Southeastern Community College	3
Southwestern Community College	1
Western Iowa Tech Community College	1

n=17

Approximately one-third (35.3%) of the respondents indicated that they served as directors of marketing at their community college, 23.5% were project managers/leads, and the remaining respondents (41.3%) reported that they had a coordinator/managerial role at their community college (see Table 2). Overall, the majority (76.5%) of respondents assisted directly with I-AM marketing while the remaining respondents served primarily as project leads or worked with the marketing VP (see Table 3). Over half (58.8%) of the respondents indicated that they also served on the statewide I-AM marketing committee (see Table 4).

Table 2.
What is your title?

Responses Provided	Percentage
Director of Marketing	35.3
Project Manager/Lead	23.5
Career Coordinator	5.9
Corporate College Coordinator	5.9
Dean	5.9
Director of Operations	5.9
Grant Case Manager	5.9
Grant Writer	5.9
Production Assistant	5.9

n=17

Table 3.
What is your role in marketing the Iowa Advanced Manufacturing (I-AM) project?

Responses Provided	Percentage
I-AM marketing assistance	76.5
Committee member	11.8
Keep marketing VP informed	5.9
Project Lead	5.9

n=17

Table 4.
Are you currently involved with the I-AM Marketing Committee (e.g., Elevate conference calls)?

Response	Percentage
Yes	58.8
No	41.2

n=17

Regional Marketing Campaign. Respondents were asked to describe their respective community colleges' marketing campaigns. In particular, they were asked questions about their community colleges' level of activity/engagement in promoting I-AM programs at their community college, the frequency of use and effectiveness of various marketing medium (e.g., Elevate Iowa,

television, social media), groups targeted (e.g., underemployed, underrepresented populations) by their campaigns, impact of their campaign on targeted groups, recruitment and retention, and sustainability of marketing the I-AM program.

Marketing respondents were asked whether their community college had spent all of funds budgeted for marketing through the I-AM grant and whether they met any challenges in spending these funds. Marketing respondents were asked to share examples of their best I-AM marketing events organized by their community colleges over the past two to three years.

Statewide Marketing Campaign. Marketing respondents were asked about the statewide marketing campaign. In particular, whether they thought that the Elevate Iowa campaign had an impact on recruitment/enrollment, retention, and awareness of I-AM, their overall satisfaction with statewide marketing efforts, whether they felt enough support was given by the statewide marketing staff regarding requirements, and/or resources available. Respondents were asked to share their thoughts about changes or improvements they would make, lessons learned, and what worked.

ABI (Iowa Association of Business and Industry) Marketing Activities. ABI was tasked with providing assistance to I-AM in marketing outside the I-AM target groups. I-AM collaborated with ABI to create a K-12 pipeline for students. Marketing respondents were also asked to provide feedback about marketing activities conducted by ABI. In particular, marketing respondents were asked how familiar they were with ABI's efforts, their overall performance in the marketing of the I-AM program, and to rate the level of importance of ABI in sustaining the Elevate Iowa campaign.

Implementation Analysis Research Question

Responses to the Marketing Survey partially answers one of following the TAACCCT grant required research questions:

- How were programs and program design improved or expanded using grant funds?

Grant funds were used to market the I-AM program at both the regional and statewide level. In particular, responses provide information about the impact of these marketing campaigns had on participating community colleges in the areas of recruitment, enrollment, and retention.

RESULTS

Regional Marketing Campaign. Marketing respondents were asked to rate their community college's level of activity in marketing and promoting the I-AM program at their community college. The majority (58.8%) indicated their community college was moderately to very active, 35.2% reported that their community college was slightly or somewhat active, and 5.9% indicated that their community college was not active at all (see Table 5).

Respondents were asked how often their community college used various forms of marketing mediums in promoting their I-AM programs. Marketing mediums used either sometimes or often by community colleges included: radio, social media, flyer/brochure, Elevate Iowa and newspapers (see Table 6). In general, respondents reported that radio, social media, flyers/brochures and newspapers were effective or very effective in recruiting students to their programs (see Table 6).

Marketing respondents were asked to identify the groups targeted by their marketing campaign. Almost all (93.8%) indicated that they targeted unemployed individuals, 87.5% indicated that they targeted underemployed and underrepresented (e.g., women, minorities) populations, and 68.8% indicated they targeted veterans (see Table 7).

Respondents were asked whether they agreed that their marketing campaign had had a positive impact on *recruitment efforts* of targeted populations (see Table 8). Over half (62.5%) agreed that their marketing campaign had a positive impact on underemployed and underrepresented populations, unemployed, and overall recruiting, and 50.1% agreed that their marketing campaign had positive impact on veterans (see Table 8).

Respondents were asked whether agreed that their marketing campaign had a positive impact on *enrollment* of targeted populations (see Table 9). Over half (66.7%) indicated that the marketing efforts had a positive impact on underemployed, underrepresented, and unemployed populations, and overall recruiting, and 46.6% agree that it had a positive impact on veterans (see Table 9).

Respondents were also asked whether their marketing campaign had a positive impact on *retention* of targeted populations (see Table 10). Over half (60.0%) indicated that marketing efforts had a positive impact on underemployed individuals, 53.4% indicated marketing efforts had a positive impact on the underrepresented and unemployed populations, and overall retention, while 33.3% indicated a positive impact on veterans (see Table 10).

Respondents were asked to share whether there were other ways that their regional I-AM marketing campaign may have impacted their community college or its students. Examples included: positive impact across the board (or in general), increasing awareness of programs, and expansion of capabilities and business partnerships (see Table 11).

When asked how likely their community college is to continue marketing the I-AM program at the regional level, over two-thirds (86.6%) indicated it is likely they will continue to market the Advanced Manufacturing programs after the grant ends and 13.4% indicated that either no decision had been made or not likely that marketing will continue (see Table 12).

Respondents were asked whether their community college had spent all of the funds budgeted for marketing; almost all (80.0%) indicated they had spent all of their marketing funds and 20.0% indicated that they had to return some of their marketing funds (see Table 13). Respondents were asked to describe the types of challenges they encountered in spending funds targeted for marketing (see Table 14). Those challenges included: incorporating grant requirements into the materials (37.5%), too many hoops to use grant dollars (25.0%), lack of support from the community college's marketing department (12.5%), and the marketing strategies were not working (12.5%; see Table 14).

Marketing respondents were asked to share examples of the best I-AM marketing events organized by their respective community colleges. Most of the respondents (81.8%) reported that activities during the National Manufacturing Day/Week/Month were the best marketing events at their community college.

Statewide Marketing Campaign. Marketing respondents were surveyed to determine their perceptions about the impact of the Elevate Iowa marketing campaign, conducted by the lead marketing team at DMACC, on their community college (see Table 16). Half (50%) of the respondents agreed that the Elevate Iowa campaign had a positive impact on recruitment, 35.7% agreed it had a positive impact on enrollment, 35.7% agreed it had a positive impact on retention, and 80.0% agreed it had a positive impact on increasing awareness of advanced manufacturing in the state (see Table 16).

Respondents were asked to rate their community college's level of satisfaction with statewide marketing efforts of the I-AM program. Overall, the majority (80%) of respondents indicated that their community college was satisfied with statewide marketing efforts, 13.3% were neutral, and 6.7% indicated that they were very dissatisfied (see Table 17). Respondents were also questioned regarding performance of the lead marketing team at DMACC. Almost all (93.3%) indicated the lead marketing team made sure they were aware of the marketing requirements, 93.4% indicated the lead marketing team was available to answer questions, 93.3% indicated the lead marketing team provided the needed resources, and 86.7% indicated the lead marketing team provided the necessary guidance (see Table 18).

Respondents were asked to provide any changes they would make to improve the marketing committee (see Table 19). Responses include: increasing college marketing team involvement, ensuring that program specific marketing is done, and showcasing different community colleges (see Table 19). Respondents were also asked to provide any changes they would make to the statewide marketing campaign in a future effort. Their responses include: community colleges further away from Des Moines did not benefit from the campaign, address issues with the

Elevate Iowa marketing campaign, and decreasing the number of hoops needed to jump through (see Table 20).

Respondents were asked to share any lessons learned (e.g., what worked?) with regards to either the regional or statewide marketing campaigns. These include: DMACC did a good job leading the marketing campaign, it is hard to ensure that the community college marketing team is involved, people on the committee should have knowledge about regional level marketing, and provide workshops on geofencing and behavioral targeting.

ABI Marketing Activities. Respondents were asked to indicate their familiarity with ABI's efforts in promoting the Advanced Manufacturing programs. Two-thirds (66.6%) indicated they were moderately familiar to very familiar. When respondents were asked to rate ABI's performance, the majority (60.0%) indicated ABI's performance was good to excellent. Slightly over half (53.3%) of the respondents indicated ABI is either very important or extremely important in sustaining the Elevate Iowa campaign after the grant ends.

The following section presents the results of the Marketing Survey: Community College Marketing Campaign, Statewide Marketing Campaign, and ABI Marketing Activities.

REGIONAL MARKETING CAMPAIGN

The following section describes local community colleges' marketing activity and plans.

Table 5.
Over the past two to three years, how active has your community college been in marketing and promoting the Iowa Advanced Manufacturing (I-AM) programs your community college provides?

Activity	Percentage
Not at All Active	5.9
Slightly Active	17.6
Somewhat Active	17.6
Moderately Active	23.5
Very Active	35.3

n=17

Table 6.
In the following section, you are asked to indicate your community college's frequency of use and effectiveness of various marketing mediums for Advanced Manufacturing programs.

		In the past two years, how often did your community college use each of the following marketing mediums?				*In the past two years, how effective have each of the following marketing mediums been in recruiting students?*				
Mediums	*n*	Never	Rarely	Sometimes	Often	Very Ineffective	Ineffective	Neither Effective nor Ineffective	Effective	Very Effective
Elevate Iowa	17	17.6	11.8	52.9	17.6	5.9	5.9	52.9	29.4	5.9
Television	17	35.3	29.4	23.5	11.8	0.0	17.3	64.7	11.8	5.9
Radio	17	11.8	11.8	41.2	35.3	0.0	5.9	29.4	52.9	11.8
Social Media (e.g., Facebook, Twitter, YouTube)	17	5.9	17.6	41.2	35.3	0.0	0.0	29.4	58.8	11.8
Newspaper	17	5.9	29.4	41.2	23.5	0.0	11.8	35.3	41.2	11.8
Flyer/Brochures	17	0.0	23.5	23.5	52.9	0.0	5.9	23.5	47.1	23.5
State Fair	17	52.9	17.6	11.8	17.6	17.3	11.8	52.9	5.9	11.8
Other	17	58.8	0.0	11.8	29.4	11.8	0.0	64.7	5.9	17.3

Note: Values reflect percentages.

Responses from the "Other" choice:
Job Fairs (3)
Chamber Blast (1)
Classroom Presentations (1)
Conferences/Meetings (1)

Table 7.
Which of the following groups does your marketing campaign funded by the I-AM project target? (Select all that apply)

Target Groups	Percentage
Underemployed	87.5
Underrepresented populations (e.g., minorities, women)	87.5
Unemployed	93.8
Veterans	68.8
Other (please specify)	12.5

n=17
Responses from the "Other" choice: Career Change/Growth for Workforce (1)

Table 8.
Please indicate the extent with which you agree with the following statements. The Advanced Manufacturing marketing campaign conducted by my community college has had a positive impact on recruitment efforts for…

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Underemployed	16	0.0	18.8	18.8	37.5	25.0
Underrepresented populations (e.g., minorities, women)	16	0.0	12.5	25.0	37.5	25.0
Unemployed	16	0.0	6.3	31.3	31.3	31.3
Veterans	16	0.0	12.5	37.5	43.8	6.3
Overall Recruiting	16	0.0	6.3	31.3	37.5	25.0

Note: Values reflect percentages.

Table 9.
Please indicate the extent with which you agree with the following statements. The Advanced Manufacturing marketing campaign conducted by my community college has had a positive impact on enrollment for…

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Underemployed	15	0.0	6.7	26.7	33.3	33.3
Underrepresented populations (e.g., minorities, women)	15	0.0	6.7	26.7	40.0	26.7
Unemployed	15	0.0	6.7	26.7	33.3	33.3
Veterans	15	0.0	13.3	40.0	33.3	13.3
Overall Enrollment	15	0.0	6.7	26.7	40.0	26.7

Note: Values reflect percentages.

Table 10.
Please indicate the extent with which you agree with the following statements. The Advanced Manufacturing marketing campaign conducted by my community college has had a positive impact on retention for…

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Underemployed	15	0.0	6.7	33.3	60.0	0.0
Underrepresented populations (e.g., minorities, women)	15	0.0	6.7	40.0	46.7	6.7
Unemployed	15	0.0	6.7	40.0	53.3	0.0
Veterans	15	0.0	13.3	53.3	33.3	0.0
Overall Retention	15	0.0	13.3	33.3	53.3	0.0

Note: Values reflect percentages.

Table 11.
In what other ways has your community college's marketing of Advanced Manufacturing programs impacted your community college? (Please describe)

Responses Provided	Percentage
Positive impact across the board	25.0
General awareness of programs	16.7
Expanded capabilities	16.7
Business partnerships	8.3
Drawn more attention to manufacturing programs	8.3
Increased media coverage	8.3
Welding program is at capacity	8.3
Wonderful having program specific source	8.3

n=12

Table 12.
How likely is your community college to continue to market the Advanced Manufacturing programs after the grant ends on September 30, 2016?

Likeliness	Percentage
Very Unlikely	0.0
Unlikely	6.7
Undecided	6.7
Likely	53.3
Very Likely	33.3

n=15

Table 13.
Did you community college spend all of the funds originally budgeted for marketing the Advanced Manufacturing programs?

Response	Percentage
Yes, we spent all of the funds	80.0
No, we returned some of the funds	20.0
No, we returned all of the funds	0.0

n=15

Table 14.
What challenges did your community college encounter in spending the funds budgeted for marketing the Advanced Manufacturing program? (Please describe)

Responses	Percentage
Incorporating grant requirements into materials	37.5
Funds reallocated to program	25.0
Too many hoops to use grant dollars	25.0
Adjusting budget to new needs	12.5
Determining what was best	12.5
Lack of support from marketing department	12.5
Marketing strategies not working	12.5

Note: Some respondents provided multiple responses.
n=8

Table 15.
Please describe the best Advanced Manufacturing marketing event organized by your community college in the past two to three years.

Responses	Percentage
Activities in Manufacturing Day/Week/Month	81.8
Air show	9.1
Television commercial	9.1

n=11

STATEWIDE MARKETING CAMPAIGN

The following section describes statewide marketing efforts (e.g., Elevate Iowa) conducted by the DMACC statewide administration team

Table 16.
Please indicate the extent with which you agree with the following statements. The Elevate Iowa marketing campaign conducted by the lead marketing team at DMACC has had a positive impact, at my community college, on…

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	I Don't Know
Recruitment	14	7.1	0.0	42.9	50.0	0.0	1
Enrollment	14	7.1	0.0	57.1	35.7	0.0	1
Retention	14	7.1	7.1	50.0	35.7	0.0	1
Awareness of Advanced Manufacturing	15	0.0	0.0	20.0	40.0	40.0	0

Note: Values reflect percentages.

Table 17.
Overall, how satisfied has your community college been with the statewide marketing efforts?

Satisfaction	Percentage
Very Dissatisfied	6.7
Dissatisfied	0.0
Neither Satisfied nor Dissatisfied	13.3
Satisfied	73.3
Very Satisfied	6.7

n=15

Table 18.
Please indicate the extent with which you agree with the following statements. The Lead Marketing Team at DMACC…

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Made sure I was aware of marketing requirements of the grant.	15	0.0	0.0	6.7	33.3	60.0
Was available to answer my questions regarding marketing requirements.	15	0.0	0.0	6.7	26.7	66.7
Provided the resources (e.g., conference calls, webinars, etc.) needed to complete our regional I-AM marketing campaign.	15	0.0	0.0	6.7	33.3	60.0
Provided the guidance I needed to run a successful marketing campaign.	15	0.0	0.0	13.3	26.7	60.0

Note: Values reflect percentages.

Table 19.
Now that the I-AM project is in its final year, what changes to the marketing committee, if any, would you make as a member of the marketing committee? (Please describe)

Responses	Percentage
College marketing team needs to be more involved	20.0
Describe Elevate's role better	20.0
Ensure program specific marketing is done	20.0
People need to be the marketing resources	20.0
Showcase different community colleges	20.0

n=5

Table 20.
If your community college were to participate in a similar statewide effort in the future, what changes or improvements to the statewide marketing campaign would you make? (Please describe)

Responses	Percentage
Community colleges away from Des Moines did not benefit from campaign	28.6
Issues with Elevate	28.6
Do region specific marketing	14.3
Ensure program specific marketing is done	14.3
More relevant involvement	14.3
Too many hoops to jump through	14.3

Note: Some respondents provided multiple responses.
n=7

Table 21.
Please share any thoughts or comments about lessons learned with regards to the regional or statewide marketing campaigns. What worked? Are there things you would change? (Please describe)

Responses	Percentage
DMACC did a good job	27.3
Hard to ensure college marketing team is involved	18.2
Do less radio ads	9.1
Hold a statewide Advanced Manufacturing fair	9.1
Manufacturing Day/Month activities	9.1
People should know regional level marketing	9.1
Simplify the I-AM credit on marketing pieces	9.1
Think outside the box	9.1
Workshop for geofencing and behavioral targeting	9.1

Note: Some respondents provided multiple responses.
n=11

ABI MARKETING ACTIVITIES

The following section describes results of questions regarding marketing activities conducted by the Iowa Association of Business and Industry (ABI).

Table 22.
How familiar are you with ABI's efforts in promoting the Advanced Manufacturing programs?

Familiarity	Percentage
Not At All Familiar	6.7
Slightly Familiar	13.3
Somewhat Familiar	13.3
Moderately Familiar	53.3
Very Familiar	13.3

n=15

Table 23.
Overall, how well has ABI performed in marketing the Advanced Manufacturing programs?

Performance	Percentage
Poor	6.7
Fair	13.3
Good	40.0
Very Good	13.3
Excellent	6.7
I Don't Know	20.0

n=15

Table 24.
How important is ABI in sustaining the Elevate Iowa campaign after the grant ends on September 30, 2016?

Importance	Percentage
Not at all Important	0.0
Very Unimportant	0.0
Neither Important nor Unimportant	13.3
Very Important	33.3
Extremely Important	20.0
I Don't Know	33.3

n=15

Appendix M:

Employer Partner Survey Report: Spring 2015

METHODOLOGY

An Employer Partner Survey was developed to assess the interaction between participating I-AM community colleges and its employer partners. The survey was developed and distributed by I-AM project leads to their respective employer partners between November and December, 2014. A total of 55 employer partners responded to the survey representing 11 of the 15 community colleges (see Table 1).

Table 1.
Community Colleges and Associated Employer Partners.

I-AM Community College	Industry/Employer Partner
Des Moines Area Community College	ALMACO
	Vermeer Corporation
Eastern Iowa Community Colleges	Bee Line Company
	Bowe Machine Co
	Carver Pump Company
	Geater Machining & Manufacturing Co
	HNI Corp
	John Deere
	Lewis Industrial Services
	McLaughlin Body Company
	Mi-T-M Corporation
	MKC Inc. dba Precision Metal Works
	Seaburg Industries, Inc.
Hawkeye Community College	Geater Machining & Manufacturing Co
	HyPro Inc.
	Power Engineering & Manufacturing Ltd.
	United Equipment Accessories, Inc.
Indian Hills Community College	Vermeer Corporation
Iowa Central Community College	Hillshire Brands
	Meridian Mfg. Inc.
	Rembrandt Foods
	Tyson Fresh Meats, Inc.
Iowa Valley Community College District	Emerson/Fisher

Table 1.
Community Colleges and Associated Employer Partners (continued).

I-AM Community College	Industry/Employer Partner
Kirkwood Community College	Apache Inc
	Bazooka Farmstar
	Centro, Inc.
	Crystal Group Inc.
	General Mills
	Highway Equipment Company
	Kinze Manufacturing
	KTOS
	Midwest Metal Products
Kirkwood Community College	MSI Mold Builders
	NCI Building Systems
	Newell Machinery Company
	NIS, Inc.
	Sadler Machine Co.
	TSF Structures, Inc/ Tipton Structural Fabrications, Inc.
Northeast Iowa Community College	A.Y. McDonald Mfg. Co.
	Ashley Industrial Molding
	Berry Plastics, Corp.
	Bodine Electric Company
	Mi-T-M Corporation
	Uelner Precision Tools& Dies, Inc.
	Webber Metal Products, Inc.
Southwestern Community College	Bunn
	Ferrara Candy Company
	Kawasaki Motors Mfg.
	Wellman Dynamics Corporation
Western Iowa Tech Community College	Gelita USA

Employer partners were asked how long their respective companies had been partnering with the community colleges, the number of hires resulting from the I-AM project, and whether any of their current employees were participating in the I-AM project and whether they participated in their local sector board, local advisory board, and/or the Elevate Campaign.

Employer partners were asked about their respective companies' expectations of the I-AM project and their views about I-AM students' preparedness to work in the Advanced Manufacturing field. Employer partners were asked whether they offered internships, externships, tours, resume review, mock interviews, certification fees, membership dues, and tuition to students at their partner community colleges. Employer partners were also asked to share their perceptions about the strengths/challenges of the I-AM project and to share any additional feedback regarding the project.

Implementation Analysis Research Question

Employer partners' responses to the survey questions partially answers the following TAACCCT grant required research question:

- What contributions did each of the partners make towards program design, curriculum development, recruitment, training, placement, program management, leveraging resources, commitment to program sustainability?

In particular, responses provide information about employer partner contribution to the program through participation in local sector/advisory board and the Elevate Campaign; contributions through opportunities (e.g., internships, tours, resume review, paying for tuition) afforded to I-AM students, as well as their satisfaction with the program.

The following section presents the results of the Fall, 2014 Employer Partner Survey:

RESULTS

Collaboration between Employer Partners and Iowa Community Colleges. The majority (68.1%) of employers surveyed have collaborated with their partner community college(s) for two or more years, 19% have collaborated between one and two years, and 12.8% have collaborated with their partner community college for less than one year (see Table 2). A majority (63.8%) of employers surveyed have hired between 0-5 I-AM project participants and slightly more than one third (36.3%) of the employer partners have hired 6 or more participants. In particular, two of the employer partners indicated that they have hired more than 25 I-AM project participants (see Table 3). Approximately half (52.3%) of the employers indicated that they have employees currently enrolled in the I-AM project, while the remaining (47.7%) of the employers do not.

Participation and Contribution of Employer Partners. Approximately 68.2% of the employers indicated that their respective companies participate in the local advisory board, 43.2% participate in the local sector board and 20.5% participate in the Elevate campaign (see Table 5).

Employer Partners' Level of Expectations. The majority (94.4%) of employer partners indicated that the I-AM project met or exceeded their expectations with regards to students in the I-AM program; progress in producing needed workers (77.5%), producing results (87.5%), students' abilities upon graduating from program (91.5%), and quality of hires (94.5%; see Table 6).

Student Opportunities Provided by Employer Partners. Almost two thirds (63.6%) of employers indicated that they offer internships, 93.2% offer tours of their facilities, resume review (50%), pay for tuition (65.9%), or hire students to work before they graduate (72.7%). To a lesser extent, employer partners also provide mock interviews (47.7%), pay membership dues (29.5%), or externships (15.9%; see Table 7).

Perceptions of I-AM Program's Strengths/Challenges. When asked about strengths of the I-AM program, 35% of employer partners indicated training students in fundamentals; 18% reported working with local industries; 13% reported increased awareness of advanced manufacturing; 13% reported qualified instructors; and 10% reported better capacity to meet with students (see Table 8). In contrast, 22.5% of employer partners indicated that there weren't enough qualified candidates/students; 7.5% indicated that it was difficult to find people interested in manufacturing; and 7.5% thought students had unrealistic wage expectations (see Table 9).

Employers also shared comments about the I-AM project. Some reported that programs are progressing well, it's a great program, the program is very beneficial, and they have made [great] efforts towards developing more skilled employees.

Table 2.
How long has your company been collaborating with your partner community college(s), specifically on the Iowa Advanced Manufacturing project?

Length of Partnership	Percentage
0-6 months	4.3
7 months – 1 year	8.5
1-2 years	19.1
Over 2 years	68.1

n=47

Table 3.
Approximately, how many hires has your company had from the Iowa Advanced Manufacturing project programs at your partner community college(s)?

Number of Hires	Percentage
0-5 hires	63.8
6-10 hires	14.9
11-15 hires	4.3
16-20 hires	8.5
21-25 hires	4.3
Over 25 hires	4.3

n=47

Table 4.
Do you have any current employees that are a part of the Iowa Advanced Manufacturing programs at your partner community college(s)?

Response	Percentage
Yes	52.3
No	47.7

n=44

Table 5.
Does your company participate in the following activities?

Activities	Yes	No
Local Sector Board	43.2	56.8
Local Advisory Board	68.2	31.8
Elevate Campaign	20.5	79.5

Note: Values reflect percentages.
n=44

Table 6.
The following statements deal with your company's expectations of the Iowa Advanced Manufacturing project at your partner community college(s).

Statements	*n*	Far Short of Expectations	Short of Expectations	Meets Expectations	Exceeds Expectations	Far Exceeds Expectations	I Don't Know
The students' progress through the Advanced Manufacturing program	44	0.0	5.6	50.0	41.6	2.8	8
The progress of the Advanced Manufacturing project in producing the needed workers	44	0.0	22.5	52.5	20.0	5.0	4
The results produced by the Advanced Manufacturing project	44	0.0	12.5	47.5	32.5	7.5	4
The ability (e.g., the students know the equipment) of the students graduating from an Advanced Manufacturing program	44	0.0	8.3	44.4	36.1	11.0	8
The quality (e.g., the students know how to use the equipment) of the student hires from an Advanced Manufacturing program	44	0.0	5.4	59.5	29.7	5.4	7

Note: Values reflect percentages.

Table 7.
Does your company offer any of the following to students at your partner community college(s) or your employees, as part of the Iowa Advanced Manufacturing project?

Offerings	Yes	No
Internships	63.6	36.4
Externships	15.9	84.1
Tours	93.2	6.8
Resume Review	50.0	50.0
Mock Interviews	47.7	52.3
Pay for Certification Fees	45.5	54.5
Pay for Membership Dues	29.5	70.5
Pay for Tuition	65.9	34.1
Hire and start working before graduation	72.7	27.3

Note: Values reflect percentages.
n=44

Table 8.
What does your company see as strengths of the Iowa Advanced Manufacturing programs at your partner community college(s)?

Responses	Percentage
Training in fundamentals	35.0
Working with the local industries	17.5
Increase awareness of Advanced Manufacturing	12.5
Qualified instructors	12.5
Better capacity to meet with students	10.0
Outreach	7.5
Quality students	7.5
Specialized focus at the community colleges	7.5
Reaching people who otherwise would not have been	5.0
Local resource	5.0
None	5.0
Good program	2.5
Individualized Certificate programs	2.5
Information sharing	2.5
Location of community college	2.5

Note: Some respondents provided multiple responses.
n=40

Table 9.
What does your company see as weaknesses of the Iowa Advanced Manufacturing programs at your partner community college(s)?

Responses	Percentage
Not enough (quality) candidates/lack of students	22.5
Difficulty finding people interested in manufacturing	7.5
Students have too little exposure to equipment	7.5
Students have unrealistic wage expectations	7.5
Lacking instructors	5.0
Limited seats/availability	5.0
Need a better link to available students	5.0
Need more involvement with local industry	5.0
Needs better promotion overall	5.0
No screening of students/talent base	5.0
Students can't pass pre-employment screenings	5.0
Expectation of guaranteed jobs	2.5
Lots of growth is needed	2.5
Needs to be better promoted for non-traditional students	2.5
The perception of the manufacturing sector	2.5
Students are too young (<18 years old)	2.5
None	22.5

Note: Some respondents provided multiple responses.
n=40

Table 10.
Comments about the Iowa Advanced Manufacturing grant programs.

Responses	Percentage
Programs are progressing well	24.0
Efforts towards developing more skilled employees	20.0
I-AM working with the employers	20.0
Very beneficial	20.0
Great program	16.0
Improving perception of manufacturing	12.0
Needs to be continuously promoted	12.0
Rebuilding the manufacturing sector	12.0
Being a part of the Advanced Manufacturing Board	8.0
Having a difficult time finding enough employees	4.0
Paperwork is cumbersome	4.0
Program close to employer	4.0
None	28.0

Note: Some respondents provided multiple responses.
n=25

Appendix N:

Employer Partner Survey Report: Fall 2015

METHODOLOGY

An Employer Partner Survey was distributed to 57 employer/industry/business partners, identified by Project Leads at each community college, between November and December, 2015. Of the 57 individuals invited to participate in the survey, 17 responded (response rate =29.8%) representing 16 different companies/businesses (see Table 1) and six of the 15 community colleges (see Table 2). Almost half (47.1%) of the partners that responded indicated that they were in human resources, 11.8% were presidents or owner of their company, and the remaining partners were in some managerial position (see Table 3).

Table 1.
What is the name of your company/business?

Responses	Number of Responses
MSI Mold Builders	2
American Ordnance	1
Centro, Inc.	1
CNH Industrial	1
Fisher Hydraulics	1
Hagie Manufacturing Company	1
Highway Equipment Company	1
Marion Economic Development Corporation	1
Meridian Mfg. Inc.	1
NIS Inc.	1
PMX Industries	1
Power Engineering & Mfg., Ltd.	1
Seaberg Industries, Inc.	1
TSF Structures	1
Tyson Foods, Inc.	1
Winegard Co.	1

n=17

Table 2.
Which community college(s) are you partnered with? (Select all that apply)

Community College	Number of Employer Partners Responding
Des Moines Area Community College	0
Eastern Iowa Community College	1
Hawkeye Community College	2
Iowa Central Community College	4
Indian Hills Community College	0
Iowa Lakes Community College	0
Iowa Valley Community College District	0
Iowa Western Community College	0
Kirkwood Community College	8
North Iowa Area Community College	1
Northeast Iowa Community College	0
Northwest Iowa Community College	0
Southeastern Community College	3
Southwestern Community College	0
Western Iowa Tech Community College	0

n=17

Table 3.
What is your role/title at your company/business?

Responses	Percentage
Human Resources	47.1
President/Owner	11.8
Business Application Manager	5.9
Community Liaison	5.9
Engineer/Apprenticeship Coordinator	5.9
Production Manager	5.9
Quality Engineer/Configuration Manager	5.9
Safety Manager	5.9
Training Manager	5.9

n=17

Employer partners were asked whether they had a collaborative partnership with the community colleges prior to the start of the I-AM project, how long their respective companies had been partnering with the community colleges, the number of hires resulting from the I-AM project, and whether any of their current employees were participating in the I-AM project and whether they participated in their local sector board, local advisory board, and/or the Elevate Campaign.

Employer partners were asked about their respective companies' expectations of the I-AM project and their views about I-AM students' preparedness to work in the Advanced Manufacturing field. Employer partners were asked whether they offered internships, externships, tours, resume review, mock interviews, certification fees, membership dues, and tuition to students at their partner community colleges.

Employer partners were asked to provide information on any changes they would make to the I-AM program, a positive student success story that exemplifies how the project impacted their company, and any lessons learned with regards to upskilling the Iowa workforce in meeting occupational needs.

Implementation Analysis Research Question

Employer partners' responses to the survey questions partially answers the following TAACCCT grant required research question:

- What contributions did each of the partners make towards program design, curriculum development, recruitment, training, placement, program management, leveraging resources, commitment to program sustainability?

In particular, responses provide information about employer partner contributions to the program through participation in local sector/advisory board and the Elevate Campaign; contributions through opportunities (e.g., internships, tours, resume review, paying for tuition) afford I-AM students, as well as their satisfaction with the program.

The following section presents the results of the Fall, 2015 Employer Partner Survey:

RESULTS

Collaboration Between Employer Partners and Iowa Community Colleges. The majority (81.3%) reported that they had collaborated with the community colleges prior to the start of the project on October 1, 2012. Of these, 50% reported that they have had a partnership with community colleges 10 or more years, 30% had partnered with the community college between 5 and 10 years, and 20% had partnered with the community college between 3 and 4 years (see Table 4). Specifically on the I-AM project, the majority (70.6%) of employers surveyed have collaborated with their partner community college(s) for two years or more years, 17.6% have collaborated between one and two years, and 5.9% have collaborated with their partner community college for less than one year (see Table 5).

Number of Hires and Current Employees. Over the past three years, 38.5% of the employers indicated that they have hired between 1-5 students, 23.1% reported hiring between 6-10 students, 7.7% reported hiring between 21-25 students, and 30.8% reported that they have not hired any students over the past three years (see Table 7). About one-third (38.5%) reported that they currently have employees that are enrolled in an I-AM program at their partner community college, 30.8% reported that none of their employees are currently enrolled, and 30.8% did not know whether any of their employees were enrolled in an I-AM program (see Table 8)

Participation and Contributions of Employer Partners. Employer partners were asked to rate their level of involvement in helping community colleges improve their program. The majority indicated they are somewhat to frequently involved in: regional (54.6%) and local (80.0%) sector boards, Elevate Iowa (50.0%), curriculum input (70.0%), identifying occupational needs (81.8%), providing access to facilities for project meetings/training (50.0%), and incumbent worker training (55.5%; see Table 9)

Employer Partners' Level of Expectations. Employers were asked to rate their level of expectations regarding progress made producing workers or students with needed skills required to work in an advanced manufacturing job. The majority (66.7%) of employers indicated that progress made by community colleges in producing enough workers to meet their needs met their expectations; 77.8% indicated progress in producing quality workers and producing students with soft skills also met or exceeded their expectations; all (100%) of the employers reported that producing students with technical skills required to begin working also met or exceeded their expectations; and almost all (90.0%) of the respondents indicated the I-AM program has succeeded in providing opportunities for upskilling the workforce (see Table 10).

Student Opportunities Provided by Employer Partners. Over two-thirds (70%) of employers indicated that they offer internships, 90% offer tours of their facilities, pay for tuition (81.8%), or hire students to work before they graduate (50%), sponsor career fairs (90%), or sponsor training (90.9). To a lesser extent, employer partners also provide resume review (40%), mock interviews (40%), pay membership dues (29.5%), or externships (15.9%; see Table 11).

Suggestions for Improving I-AM. Employers shared various suggestions that could help improve producing workers for advanced manufacturing jobs in Iowa. Suggestions include: being more responsive to employer needs; engage in more assertive outreach to high school students; and conduct more/better marketing events (see Table 12).

Positive Student Success Stories. Employers were invited to share positive student success stories that illustrate how the I-AM project has impacted their companies. Employers included descriptions of students successfully transitioning from welding programs and assimilating into robotics positions, other described helping personnel achieve a higher level of competency, and providing tours to students that lead to their applying for jobs (see Table 13).

Lessons Learned/What Works. Employers indicated the need to change the stereotyped "dirty" image of manufacturing to reflect what it really is. Others reported that apprenticeships are helpful, the need to promote skilled labor, and not seeing much benefit of NCRC (see Table 14).

Table 4.
Did your company collaborate with your partner community college(s) prior to the start of the Advanced Manufacturing project on October 1, 2012?

Responses	Percentage
Yes	81.3
No	18.8

n=16

Table 5.
How long has your company collaborated with your partner community college(s), specifically on the Iowa Advanced Manufacturing project?

Length of Partnership	Percentage
1-6 months	5.9
7 months – 1 year	0.0
1-2 years	17.6
Over 2 years	70.6
We don't collaborate or work with community colleges	5.9

n=17

Table 6.
How long, before October 1, 2012 (the start of the Advanced Manufacturing project), has your company collaborated with your partner community college(s)?

Length of Partnership	Percentage
1-2 years	0.0
3-4 years	20.0
5-6 years	10.0
7-8 years	10.0
9-10 years	10.0
Over 10 years	50.0

n=10

Table 7.
Over the past 3 years, approximately how many Advanced Manufacturing students has your company hired from partner community college(s)?

Number of Hires	Percentage
1-5 hires	38.5
6-10 hires	23.1
11-15 hires	0.0
16-20 hires	0.0
21-25 hires	7.7
Over 25 hires	0.0
None	30.8

n=13

Table 8.
Do you have any employees currently enrolled in Iowa Advanced Manufacturing programs at your partner community college(s)?

Responses	Percentage
Yes	38.5
No	30.8
I Don’t Know	30.8

n=13

Table 9.

When the I-AM began approximately 3 years ago, employer partners identified numerous ways in which they would participate with the project. The following question asks about your company's involvement with some of the activities identified. How involved is your company with any of the following Iowa Advanced Manufacturing activities?

Activities	*n*	No Involvement	Little Involvement	Some Involvement	Frequent Involvement	I Don't Know
Regional Sector Board	11	45.5	0.0	9.1	45.5	2
Local Advisory Board	10	20.0	0.0	0.0	80.0	3
Elevate Iowa	10	40.0	10.0	10.0	40.0	3
Curriculum Input (apart from the Sector and Advisory Boards)	10	20.0	10.0	30.0	40.0	3
Identifying Occupational Needs	11	18.2	0.0	27.3	54.5	2
Provide access to facilities for project meetings/training	12	41.7	8.3	25.0	25.0	1
Identification of potential program instructors and faculty	11	36.4	18.2	36.4	9.1	2
Donate equipment	8	50.0	12.5	37.5	0.0	5
Incumbent worker training	9	22.2	22.2	33.3	22.2	4

Note: Values reflect percentages.

Table 10.
How well did the Iowa Advanced Manufacturing project at your community college partner(s) do in meeting each of the following statements.

Statements	*n*	Far Short of Expectations	Short of Expectations	Meets Expectations	Exceeds Expectations	Far Exceeds Expectations	I Don't Know
Progress in producing enough workers to meet hiring needs/demand for workers.	9	11.1	22.2	66.7	0.0	0.0	4
Progress in producing quality workers to meet hiring needs/demand for workers.	9	0.0	22.2	66.7	11.1	0.0	4
Producing students that have the technical skills/abilities (e.g., knowledge of equipment) required to begin working with minimal training or guidance.	9	0.0	0.0	88.9	11.1	0.0	4
Producing students that have the soft skills (e.g., communication skills, problem solving) required to begin working at my company.	9	0.0	22.2	66.7	11.1	0.0	4
The Advanced Manufacturing project has succeeded in providing opportunities for upskilling of the workforce.	10	0.0	10.0	50.0	40.0	0.0	3

Note: Values reflect percentages.

Table 11.
As a partner of the Advanced Manufacturing project and a stakeholder in the community that you represent, does your company provide any of the following opportunities to students participating in the Advanced Manufacturing program?

Opportunities	*n*	Yes	No	I Don't Know
Internships	10	70.0	30.0	2
Apprenticeships	11	36.3	63.6	1
Externships (e.g., faculty training)	10	30.0	70.0	2
Mentoring	11	54.5	45.4	1
Tours	10	90.0	10.0	2
Resume Review	10	40.0	60.0	2
Mock Interviews	10	40.0	60.0	2
Pay for Certification Fees/Membership Dues	10	60.0	40.0	2
Scholarship/Tuition/Tuition Reimbursement	11	81.8	18.2	1
Hire students prior to graduation	10	50.0	50.0	2
Referring unsuccessful applicants to Advanced Manufacturing program	11	54.5	45.4	1
Flexibility to incumbent workers	8	75.0	25.0	4
Company sponsored training	11	90.9	9.1	1
Career Fairs	10	90.0	10.0	2

Note: Values reflect percentages.

Table 12.
Now that the I-AM project is in its final year, what changes, if any, would you make as an employer that has partnered on this project? (Please describe)

Responses Provided	Percentage
Be more responsive to employer needs	14.3
Continue to promote skilled manufacturing	14.3
Continue training sessions	14.3
Help people get basic manufacturing skills	14.3
More assertive outreach to high school students	14.3
More/better marketing events	14.3
Need more/newer equipment at college	14.3

n=7

Table 13.
Please share a positive student success story that exemplifies how the project has impacted your company.

Responses	Percentage
Enrolling high school students as interns so they can be learning on the machines before they even enroll in classes	16.7
Knowledge from community college's training classes	16.7
Many students have come directly from the welding program and have successfully assimilated into robotics positions	16.7
The apprenticeship program has allowed employees to get promotions – sometimes into management roles	16.7
The program has provided a standard method for assessing personnel competency and helping personnel achieve a higher level of competency	16.7
Tours of the facilities can lead to students applying for positions/getting promotions	16.7

n=6

Table 14.
Please share any thoughts or comments about lessons learned with regards to upskilling the Iowa workforce in meeting occupational needs. What worked? Are there things you would change? (Please describe)

Responses	Percentage
Apprenticeships are helpful	20.0
Change dirty image of manufacturing	20.0
Have not seen the benefit of NCRC	20.0
It's a tough industry to train	20.0
Promote skilled labor	20.0
Search & expand that would benefit NIS	20.0

Note: Some respondents provided multiple responses.
n=5

Appendix O:

Welding Faculty/Subcommittee Survey Report: Spring 2015

METHODOLOGY

Welding Subcommittee Participants

The I-AM Welding Subcommittee was comprised of faculty members and I-AM leaders from each participating community college. In December 2014, 51 members of the Welding Subcommittee were asked to complete a survey regarding the consortium-wide AWS SENSE alignment and their participation in the committee. Thirty-five subcommittee members subsequently completed the survey for a total response rate of 68.6%. Responding subcommittee members represented 14 of the 15 community colleges (see Table 1).

Table 1.
At which community college do you work?

Community College	Number of Respondents
Des Moines Area Community College	4
Eastern Iowa Community College	2
Hawkeye Community College	3
Iowa Central Community College	1
Indian Hills Community College	3
Iowa Lakes Community College	2
Iowa Valley Community College District	3
Iowa Western Community College	0
Kirkwood Community College	3
North Iowa Area Community College	1
Northeast Iowa Community College	2
Northwest Iowa Community College	1
Southeastern Community College	3
Southwestern Community College	4
Western Iowa Tech Community College	3

n=35

Welding Subcommittee Survey

The survey completed by each respondent consisted five sections. In the first section, subcommittee members asked whether they were faculty members, whether they held any welding certifications (e.g., CWE, CWI) and whether the welding program at their respective community colleges was important for students and the college.

In the second section, subcommittee members were asked about the status of AWS SENSE alignment at their respective community colleges. In particular, committee members were asked about the current status of alignment, implementation, and whether they thought AWS SENSE alignment is beneficial to students, employers, and the community college. The third section of the survey asks subcommittee members to rate their level of attendance to consortium-wide meetings and to provide feedback for improving overall attendance for the consortium-wide welding curriculum meetings.

The fourth section of the survey, administered to only those subcommittee members that indicated they were welding faculty, consisted of questions related to the teaching of welding classes (e.g., teaching preparedness, sufficient materials and resources, etc.) and whether subcommittee members thought students were adequately prepared to enter the field upon completion of the program.

The final section of the survey asked subcommittee members about their thoughts regarding the effectiveness of communication between them and various groups (e.g., other faculty, I-AM project leads, advisors, navigators, and students). In this final section, subcommittee members were also asked to describe the strengths and challenges of collaborating in the implementation of the AWS SENSE core curriculum and whether their community college would be incorporating any additional knowledge or skills areas into the welding curriculum beyond the SENSE Level I core courses.

Implementation Analysis Research Questions

Responses to the Welding Subcommittee survey partially answer two of the following TAACCCT grant required research questions:

- How was the particular curriculum selected, used, or created?
- How were programs and program design improved or expanded using grant funds?

In particular, the responses regarding AWS SENSE alignment and teaching of the welding classes provides information about perceptions of the committee members regarding the importance of the program, whether they were supportive of it, and the impact AWS SENSE alignment has had on their community college and its students. It also provides information about members' participation in the development and implementation of the curriculum.

RESULTS

Welding Faculty Status. Fifteen welding committee members indicated that they are faculty members at their community college (see Table 2). Approximately 40% of the committee members indicated that they have at least one certification (see Table 3). Of these committee members, the majority (71.4%) held CWI certifications, 57.1% held CWE certifications, while 42.9% held other types of certifications (see Table 4).

Importance of Welding Program. Overall, the majority (94.3%) of committee members agreed or strongly agreed that the welding program is important to both students and the community college and that they were supportive of welding efforts at their respective community colleges (see Table 5).

AWS SENSE Alignment. Committee members' responses indicated that community colleges were in various stages of completing the AWS SENSE alignment: 14.3% had just started, 34.3% were in progress, 14.3% were almost complete, and 28.6% had completed the process (see Table 6). The majority (85.7%) indicated that they were going to be implementing at least some of the SENSE aligned welding courses in the 2015-2016 academic year (see Table 7). The remaining members indicated that they did not know whether these courses would be implemented or they may have other plans (see Table 8).

Overall, the majority (83.5%) of committee members felt that their community college had made adequate progress towards AWS SENSE alignment (see Table 9). The majority (83.4%) of committee members felt that the alignment was beneficial to students, 80.0% indicated that it was beneficial to their community college, 66.7% indicated that it was beneficial to local employers, and 76.7% indicated that it will better prepare students for the workforce (see Table 9).

Committee Participation. Committee members were asked about their attendance to consortium-wide welding curriculum meetings and whether they had any suggestions on improving overall attendance to these meetings. In general, 78.7% of committee members indicated that they attended every meeting or that they rarely/occasionally missed meetings (see Table 10). Committee members indicated that overall attendance to meetings could be improved by rotating the location of the meetings, using webinars, and by inviting other individuals (e.g. CAOs, all instructors, curriculum developers) in addition to those that currently attend (see Table 11).

Classes Taught/Preparation of Students. Welding faculty were asked about welding classes they teach (see Table 12). All (100%) of the committee members agreed that they feel prepared to teach their classes. The majority (76.9%) of the committee members indicated that they are more of a hands-on teacher than lecture teacher (see Table 12). With regards to whether faculty had all of the equipment they needed to teach classes, just under half (46.2%) agreed that they have all of the equipment needed, 23.1% neither agreed nor disagreed, and 23.1% disagreed that they have the necessary equipment to teach classes. All (100%) committee members responding

agreed that the equipment in their classroom is representative of what is in industry. In addition, the majority (69.2%) agreed that they have all of the resources (not including equipment) needed to teach (see Table 12).

The majority (93.9%) of committee members indicated that students were adequately prepared to enter the field of welding upon completion of the program (see Table 13). In contrast, the 6.1% that indicated students are not considered adequately prepared gave the following reasons: insufficient money, space, and time for training, students have weak math skills and inadequate soft skills, and there is a low reliance on instructor input (see Table 14).

Communication. Committee members were asked about communication between them and various groups. In general, the majority of committee members felt that communication between them, other faculty members (83.9%), I-AM project leads (77.5%), college leadership (81.2%), advisors/navigators/career coaches/success coaches (77.4%), students (88.8%) and welding faculty (83.4%) at their respective colleges is effective or very effective (see Table 15). In contrast, the committee members thought that communication between themselves and welding faculty at other community colleges (51.7%) and other members of welding subcommittee (66.7%) was not as effective as the other groups (see Table 15).

Strengths/Challenges of the Program. Welding committee members were asked to share what they perceived to be the top three strengths of the collaborative SENSE core curriculum development process (see Table 16). Members identified the following strengths of the program: consistency among community colleges, transferability/establishment of courses/skills, and alignment (see Table 16). Committee members also identified several challenges to the process: getting people to agree on changes, time (e.g. attendance, implementing changes), everyone not being on the same level, and getting faculty at their community college to accept the changes being made (see Table 17).

Committee members were asked whether their respective community college had added or planned to add any additional welding programs beyond the SENSE Level 1 core courses. Several committee members indicated that their community colleges added or plan to add the following knowledge/skill areas beyond the SENSE Level 1 core courses: fabrication, pipe welding, GMAW pulse, and SENSE Level II.

The results of the Welding Subcommittee Survey are presented in the following sections: Preparation, AWS SENSE Alignment, Students/Teaching, Communication, and Strengths/Challenges of the Program.

PREPARATION

The following section describes whether Welding subcommittee members are faculty in welding, have any third party certifications and their perception of the importance of the welding program at their community colleges.

Table 2.
Are you a welding faculty member at your community college?

Response	Percentage
Yes	42.9
No	57.1

n=35

Table 3.
Do you have any certifications (e.g., CWE, CWI)?

Response	Percentage
Yes	40.0
No	60.0

n=35

Table 4.
Which certification(s) do you possess?

Certifications	Percentage
CWE	57.1
CWI	71.4
Other (please specify)	42.9

Note: The percentages do not add up to 100%.
n=14
Responses from the "Other" choice: AWS D1.1 GMAW (2)
AWS D1.1 SMAW (2)
ASNT ACCT VT Level II (1)
AWS D17.1 (1)
Journeyman Sheet Metal Worker (1)

Table 5.
The next statements ask you about the Welding program at your community college.

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Total Agree
The Welding program is important for students.	35	5.7	0.0	0.0	5.7	88.6	94.3
The Welding program is important to my community college.	35	5.7	0.0	0.0	5.7	88.6	94.3
I am supportive of Welding efforts at my community college.	35	5.7	0.0	0.0	11.4	82.9	94.3

Note: Values reflect percentages.

AWS SENSE ALIGNMENT

The following section presents results of committee members' responses regarding AWS SENSE alignment taking place throughout the consortium, their respective community college and about the consortium wide meetings.

Table 6.
What is the status of AWS SENSE alignment at your community college?

Status	Percentage
Not yet started	8.6
Just started	14.3
In Progress	34.3
Almost Complete	14.3
Complete	28.6

n=35

Table 7.
Will you be implementing all or some of the SENSE aligned welding courses for the 2015-2016 academic year?

Response	Percentage
Yes	85.7
No	14.3

n=35

Table 8.
Why are you not implementing the SENSE aligned welding courses in the 2015-2016 academic year?

Responses	Percentage
Not felt to be the most important thing for next year	33.3
Not sure if it is being implemented	33.3
We already have a success story	33.3

n=3

Table 9.
These next statements deal with the AWS SENSE alignment occurring at your community college.

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Total Agree
My community college has made adequate progression towards AWS SENSE alignment.	30	3.3	6.6	6.6	30.0	53.5	83.5
AWS SENSE alignment is beneficial to our students.	30	3.3	0.0	13.3	36.7	46.7	83.4
AWS SENSE alignment is beneficial to my community college.	30	3.3	0.0	16.7	30.0	50.0	80.0
AWS SENSE alignment is beneficial to local employers.	30	3.3	0.0	30.0	30.0	36.7	66.7
AWS SENSE alignment will better prepare students for the workforce.	30	3.3	3.3	16.7	33.3	43.4	76.7

Note: Values reflect percentages.

Table 10.
How often do you attend the consortium-wide welding curriculum meetings?

Attendance	Percentage
I am at every meeting	24.2
I rarely miss a meeting	24.2
I occasionally miss a meeting	30.3
I miss almost all meetings	18.2
Have never been to a meeting	3.0

n=33

Table 11.
What could be done to improve overall attendance in the consortium-wide welding curriculum meetings?

Responses	Percentage
Rotate locations	26.9
Attendance is fine	19.2
Scheduling issues	15.4
Use webinars	11.5
Involve CAOs	7.7
Schedule meetings at different times	7.7
Central location	3.8
Give a stipend to attend	3.8
Include all instructors	3.8
Involve a curriculum developer	3.8
Make it mandatory	3.8
Provide substitute classes or instructors	3.8
Shut down the welding programs for the meetings	3.8

Note: Some committee members provided multiple responses.
n=26

CLASSES TAUGHT/PREPARATION OF STUDENTS

The following section describes Welding faculty members' responses about classes they teach and whether they think the program adequately prepares welding students for future jobs.

Table 12.
The following questions ask you to think about the welding classes you teach.

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Total Agree
I feel prepared to teach.	13	0.0	0.0	0.0	38.5	61.5	100.0
I am more hands-on teaching than lecture teaching.	13	0.0	0.0	23.1	30.8	46.1	76.9
I have all the equipment I need to teach my classes.	13	7.7	23.1	23.1	38.5	7.7	46.2
I have all the resources (excluding equipment) to teach.	13	7.7	23.1	0.0	61.5	7.7	69.2
I can teach without the aid of technology (e.g., computer and other classroom technology).	13	0.0	30.8	30.8	23.1	15.3	38.4
I feel the equipment in my classroom is representative of what is used in industry.	13	0.0	0.0	0.0	76.9	23.1	100.0

Note: Values reflect percentages.

Table 13.
Are students adequately prepared to enter the field of welding upon completion of the welding program?

Response	Percentage
Yes	93.9
No	6.1

n=33

Table 14.
In what ways are students NOT adequately prepared for a job in welding?

Responses	Percentage
Not enough money, space, and time	100.0
Inadequate soft skills	50.0
Low reliance on instructor input	50.0
Weak math skills	50.0

Note: Some committee members provided multiple responses.
n=2

COMMUNICATION

The following section describes results Welding subcommittee members' perception communication between members, students, and college leadership.

Table 15.
How is communication between you and …

Groups	*n*	Very Ineffective	Ineffective	Somewhat Ineffective	Somewhat Effective	Effective	Very Effective	Not Familiar with or Not Applicable
Other faculty members at your community college	31	0.0	0.0	6.5	9.7	48.4	35.5	2
The I-AM project lead at your community college	31	3.2	0.0	12.9	6.5	32.3	45.2	2
College leadership	32	0.0	0.0	6.3	12.5	53.1	28.1	1
Advisors/ navigators/ career coaches/ success coaches	31	3.2	0.0	12.9	6.5	35.5	41.9	2
The students in the welding program	27	0.0	0.0	0.0	11.1	48.1	40.7	6
Other welding faculty members at your community college	30	0.0	0.0	6.7	10.0	26.7	56.7	3
Welding faculty members at other community colleges	29	0.0	3.4	6.9	37.9	41.4	10.3	4
The welding subcommittee	24	0.0	8.3	4.2	20.8	29.2	37.5	9

Note: Values reflect percentages.

STRENGTHS/CHALLENGES OF THE PROGRAM

The following section presents results of committee members' perceptions of the strengths and challenges in designing a SENSE core curriculum for use across the entire consortium. Responses to whether committee members plan to go beyond SENSE Level I in their respective community college curriculum are also presented.

Table 16.
What are the top 3 strengths of the collaborative SENSE core curriculum development process?

Responses	Percentage
Consistency among community colleges	34.5
Transferability/Establishment of courses/skills	34.5
Alignment	31.0
Cooperation/Collaboration	24.1
Local industry needs/standards	24.1
Sharing ideas/Solving issues	24.1
Communication	20.7
Comparing curriculum	20.7
Great guideline/framework	17.2
Networking	10.3
Certification of students	6.9
Common course numbering	6.9
Participation	6.9
Awareness	3.4
Choices	3.4
Competency	3.4
Critical examination	3.4
Documentation	3.4
Effective management	3.4
Good for marketing	3.4
Recognizing differences	3.4
Skill building for faculty	3.4

Note: Some committee members provided multiple responses
$n=29$

Table 17.
What challenges have you had in the collaborative SENSE core curriculum development process?

Responses	Percentage
Getting faculty/others to agree on changes	35.0
Time (attending; implementing changes)	20.0
Being forced to make this change	15.0
Everyone is not on the same level	15.0
Involvement from all sides	15.0
Does not meet everyone's needs	10.0
Misinformation/Misleading information	5.0
Resources	5.0

Note: Some committee members provided multiple responses.
n=20

Table 18.
Are there any additional knowledge or skill areas you have added or plan to add to your welding program beyond the SENSE Level 1 core courses?

Responses	Percentage
Fabrication	26.7
Pipe Welding	20.0
Advanced classes and skills	13.3
GMAW pulse	13.3
SENSE Level II	13.3
Shop Operations	13.3
Automation	6.7
Blueprint Reading	6.7
Computer Literacy	6.7
Employment Communications	6.7
Math	6.7
More time in GMAW and GTAW	6.7
Oxy-Acetylene Welding	6.7
Possible ATF	6.7
Robotic Welding	6.7

Note: Some committee members provided multiple responses.
n=15

Appendix P:

Faculty Survey Report: Spring 2015

METHODOLOGY

Faculty Survey Participants. A survey was developed and distributed to faculty members participating in various I-AM programs to assess their areas of focus and tenure in the program as well as their perceptions about the I-AM program in general in April, 2015. A total of 22 faculty members completed the survey representing eight of the 15 community colleges (see Table 1).

Table 1.
At which community college do you work?

Community College	Number of Respondents
Des Moines Area Community College	3
Eastern Iowa Community College	3
Hawkeye Community College	0
Iowa Central Community College	3
Indian Hills Community College	4
Iowa Lakes Community College	0
Iowa Valley Community College District	1
Iowa Western Community College	3
Kirkwood Community College	0
North Iowa Area Community College	4
Northeast Iowa Community College	0
Northwest Iowa Community College	0
Southeastern Community College	0
Southwestern Community College	0
Western Iowa Tech Community College	1

n=22

Faculty Survey. The survey completed by each respondent consisted of six sections. In the first section, respondents were asked to identify their area of focus, their role, and their tenure working on the I-AM project.

Faculty members were asked to identify the type of training they have received to date, any certification they held or still needed, and whether they received the training (e.g., professional development) they needed to get their classrooms up and running.

Faculty were asked about classroom preparedness and their perceived needs for teaching their respective I-AM courses. Faculty were asked whether they needed additional professional development, equipment, or any other additional resources to get their classrooms up and running. Faculty members were asked about the students in the programs at their respective community colleges, the number of office hours they hold each week, and whether they knew which students were I-AM participants. They were also asked to rate students' progress through the program and whether they thought the I-AM project adequately prepared students for jobs in their field.

Faculty members were asked to rate their level of contribution to the curriculum development at their community college and to rate the effectiveness of communication between themselves and various groups.

Faculty members were asked to share their thoughts about the strengths, challenges, and sustainability of the program at their community college. Respondents were also asked whether they thought the I-AM program was beneficial to their community college and its students, whether they were supportive of I-AM efforts, and their perceived importance of the grant. Faculty members were also asked whether they agreed with the various strategies identified for the I-AM program at their community college.

Implementation Analysis Research Questions

Faculty members' responses to the survey partially answers two of the following TAACCCT grant required research questions:

- How was the particular curriculum selected, used, or created?
- How were programs and program design improved or expanded using grant funds?

In particular, the responses provided by faculty provide information regarding their level of engagement in the project, whether they received training, and hold any certifications required for teaching their respective classes. Also, faculty perceptions about alignment of curricula with industry standards, teaching of advanced manufacturing classes, credit for prior learning and third party certifications are central to understanding what worked in the I-AM project and how it may be improved in similar areas of learning or projects in the future.

RESULTS

Faculty Area of Focus, Role in I-AM, and Length of Tenure in I-AM Program. Of the 22 faculty members that responded to the survey, the majority (59.1%) of respondents reported their area of focus was welding, 22.7% reported their area of focus was Machining/CNC/Tool and Die, 13.6% reported Industrial Maintenance, and 4.5% reported that their area of focus was Manufacturing Technology (see Table 2). The majority (63.6%) reported that their primary role in the I-AM program was instructor/faculty, the remaining respondents reported that their main role was coordinator, chair, advisor, or support (see Table 3).

At the time of the survey, 65% of the respondents indicated that they had worked on the project between two and three years, 15% had worked on the project more than 3 years, and 20% had worked on the project between 6 months and 1 year (see Table 4)

Faculty Training and Certifications. Faculty were asked about the types of training they have received or still needed for the I-AM program. The majority (81.8%) reported that they had received the training needed to get their classrooms up and running (see Table 5). Faculty that said they had not, responded that they were already up and running and did not require additional training, that they will not be involved, or that training was scheduled and it would happen shortly (see Table 6). Almost all (90.9%) indicated they have certifications in their field. Half have AWS certification, one-quarter have NIMS certification, and 15.0% have NCRC certification.

Faculty and Program Preparedness. Faculty members were asked about classroom preparedness and whether they had all of the resources they needed. The majority (90.5%) felt they were prepared to teach their courses and only 23.8% thought they needed professional development to teach their course (see Table 9). About half (52.4%) agreed that they have all of the equipment and 42.9% agreed they had all of the resources needed to teach their courses (see Table 9). Approximately 66.7% agreed that the equipment in their classrooms is representative of what is used in industry (see. Table 9).

Approximately half (50.1%) of faculty that indicated they did not have all of the equipment needed reported that they anticipate receiving their equipment by summer, 2015 or early fall, 2015 (see Table 10). The remainder either had their equipment in place or were expecting sometime in the next year (49.9%; see Table 10). When asked whether they need any additional resources other than equipment in their classrooms, a couple of faculty members suggested updated lecture training videos and more visual aids (see Table 11).

The majority (95.2%) of faculty reported that they had a back-up plan should their classroom/lab or online activity suddenly become unavailable (e.g., equipment failure; see Table 12). Faculty reported that they would use other resources such as blackboard/whiteboard, cover a different section, while others indicated that they have plenty of equipment where failure would not impact their ability to teach (see Table 13).

Interactions with Students and Perceptions of Preparedness. The majority (66.6%) of faculty hold weekly office hours ranging from 1 hour to over 7 hours per week to consult with students (see Table 14). Half (57.1%) cannot identify which students are participating in the I-AM project at their community college (see Table 15). The majority (81.0%) of faculty agree that students are making adequate progress through their classrooms (see Table 16) and about half (52.3%) agree that the I-AM program adequately prepares the students (see Table 17). Most (95.2%) of faculty that responded to the survey reported that some of their classes take place during the day and 42.9% reported some of their classes are available during the evening. Only 4.8% reported that they offer classes on weekends (see Table 18).

Faculty Contribution and Communication. Faculty were asked to rate their level of contribution in the development of the curriculum for the I-AM project. About 28.6% of faculty members reported that their level of contribution was high to very high, 47.6% reported that their level of contribution was moderate, and 23.8% reported that their level of contribution was low to very low (see Table 19). Overall, faculty members rated communication between the I-AM faculty members and various other groups (e.g., college leadership, the grant team, and students) effective to very effective (see Table 20).

I-AM Program Strengths, Challenge, and Sustainability. Faculty members were asked to share what they what they thought about the strengths, challenges, and sustainability of the program. Faculty reported that they thought the top strengths of the program included its equipment, that it was backed and/or acknowledged by industry, it provided options to meet students' needs, and having skilled instructors. Other strengths included the consistency across community colleges, keeping the curriculum current and offering stacked credentials (see Table 21).

Faculty also described challenges that they have encountered while working on the program. Some challenges include trying to fit into the program; the extra amount of work and paperwork needed; costs of equipment, and perhaps not having the correct people in lead role positions (see Table 22).

The majority (61.1%) of faculty members agreed that the program is sustainable after the grant ends, 27.8% did not agree nor disagree, and 11.2% did not agree that the program was sustainable (see Table 23). Overall, however, the majority (88.9%) of faculty agreed that the program is beneficial for students and 83.3% agreed that it is beneficial for their respective community colleges. An overwhelming 94.4% of faculty agreed that they were supportive of the program and that it was an important program for student and their community college (see Table 24)

Faculty members were also asked to rate their level of agreement on the various strategies identified for the I-AM program at their respective community colleges. Overall, faculty agreed that with the strategies (e.g., aligning curricula, establishing AWS accredited test facilities, engaging employers; see Table 25).

The following section describe results of the faculty survey: Faculty Background, Training, Preparation, Students, Contribution/Communication, and Strengths and Challenges of the Program.

BACKGROUND

The following section describes faculty members' focus area, their role, and length of participation with the I-AM project.

Table 2.
What is your area of focus?

Response	Percentage
Industrial Automation	0.0
Industrial Maintenance	13.6
Machining/CNC/Tool and Die	22.7
Manufacturing Technician/Technology	4.5
Robotics	0.0
Transportation and Logistics	0.0
Welding Technician/Technology	59.1

n=22

Table 3.
What is your role in your community college's Iowa Advanced Manufacturing (I-AM) program?

Responses Provided	Percentage
Instructor	63.6
Coordinator	9.1
Program/Division Chair	9.1
ATF (Accredited Testing Facilities)	4.5
Faculty advisor	4.5
Minor input	4.5
Support	4.5

n=22

Table 4.
How long have you been working on the program?

Responses	Percentage
6 months	10.0
9 months	5.0
1 year	5.0
2 years	35.0
3 years	30.0
More than 3 years	15.0

n=20

TRAINING

The following section describes types of training (e.g., needed, received) and certification held by participating faculty.

Table 5.
Have you received the training (e.g., professional development) needed to get your classrooms up and running?

Response	Percentage
Yes	81.8
No	18.2

n=22

Table 6.
What training do you need to have your classrooms up and running?

Responses provided	Percentage
Classroom is all self-learning	25.0
Equipment training is scheduled	25.0
I am already up and running	25.0
Won't be involved	25.0

Note: Respondents that answered "no" to question in Table 5, were asked this additional question
n=4

Table 7.
Do you have certification(s) in your field?

Response	Percentage
Yes	90.9
No	9.1

n=22

Table 8.
Which certifications do you possess?

Certifications	Percentage
AWS (American Welding Society)	50.0
NIMS (National Institute for Metalworking Skills)	25.0
MSSC CPT (Manufacturing Skills Standards Council Certified Production Technician)	5.0
MSSC CLT (Manufacturing Skills Standards Council Certified Logistics Technician)	0.0
APICS CPIM (American Production and Inventory Control Society Certified in Production and Inventory Management)	0.0
APICS CSCP (American Production and Inventory Control Society Certified Supply Chain Professional)	0.0
SME (Society of Manufacturing Engineers)	0.0
NCRC (National Career Readiness Certificate)	15.0
Other (please specify)	30.0

Note: The percentages do not add up to 100%.
n=20
Responses from the "Other" choice: Journeyman Tool and Die Maker (2)
1 G Qualification (1)
AAS in Computer Integrated Fabrication (1)
Welding classes through Lincoln Electric Company (1)

PREPARATION

The following section describes faculty's perception of classroom preparedness and perceived needs for teaching their respective courses.

Table 9.
The following questions ask you to think about the classes you teach.

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Total Agree
I feel prepared to teach.	21	4.8	0.0	4.8	52.4	38.1	90.5
I would teach a class of few students differently than I would a large class.	21	4.8	14.3	47.6	14.3	19.0	33.3
I need professional development/ assistance to teach large classes.	21	4.8	38.1	33.3	19.0	4.8	23.8
I am more hands-on teaching than lecture teaching.	21	0.0	4.8	28.6	42.9	23.8	66.7
I have all the equipment I need to teach my classes.	21	4.8	23.8	19.0	38.1	14.3	52.4
I have all the resources (excluding equipment) to teach.	21	4.8	19.0	33.3	38.1	4.8	42.9
I can teach without the aid of technology.	21	9.5	38.1	14.3	19.0	19.0	38.0
I feel the equipment in my classroom is representative of what is used in industry.	21	4.8	14.3	14.3	42.9	23.8	66.7

Note: Values reflect percentages.

Table 10.
When do you anticipate receiving needed equipment?

Responses	Percentage
Summer 2015/Fall 2015	50.1
Within the next year	16.7
5-7 years	16.7
Already have needed equipment	16.7

n=6

Table 11.
What additional resources (other than equipment) do you need, that you don't currently have, to teach your classes?

Responses Provided	Percentage
Updated lecture training videos	50.0
Visual aids	50.0

n=2

Table 12.
Do you have a backup plan if a classroom/lab/online activity suddenly becomes unavailable (ex: equipment failure)?

Response	Percentage
Yes	95.2
No	4.8

n=21

Table 13.
What is your backup plan in case something cannot be done?

Responses Provided	Percentage
Use other resources (e.g. blackboards/whiteboards)	41.7
Move to a different section/process	21.1
Have plenty of equipment	15.8
Other (e.g., cancel class, different projects	21.1

n=19

STUDENTS

The following section describes faculty perception about students, students' progress and their thoughts about preparing students for their job field.

Table 14.
How many hours a week do you hold office hours?

Response	Percentage
1-2 hours	9.5
3-4 hours	9.5
5-6 hours	19.0
7 or more hours	28.6
I do not hold office hours	33.3

n=21

Table 15.
Do you know which students are participating in the I-AM project at your community college?

Response	Percentage
Yes	57.1
No	42.9

n=21

Table 16.
The I-AM program adequately prepares students for jobs in their field.

Response	Percentage
Strongly Disagree	4.8
Disagree	0.0
Neither Agree nor Disagree	42.9
Agree	33.3
Strongly Agree	19.0

n=21

Table 17.
In general, students in my classrooms are making adequate progress.

Response	Percentage
Strongly Disagree	4.8
Disagree	0.0
Neither Agree nor Disagree	14.3
Agree	66.7
Strongly Agree	14.3

n=21

Table 18.
When are your classes offered? (Select all that apply)

Response	Percentage
Days	95.2
Evenings	42.9
Weekends	4.8

Note: The percentages do not add up to 100%.
n=21

CONTRIBUTION/COMMUNICATION

This section centers on the communication taking place between the faculty member and various groups of people as well as the faculty member's contribution to the program.

Table 19.
Please rate your level of contribution in the development of the curriculum for the Iowa Advanced Manufacturing program at your community college.

Response	Percentage
Very Low	9.5
Low	14.3
Moderate	47.6
High	14.3
Very High	14.3

n=21

Table 20.
How is the communication between you and …

Groups	*n*	Very Ineffective	Ineffective	Somewhat Ineffective	Somewhat Effective	Effective	Very Effective	Not Familiar with or Not Applicable
Other faculty members in the I-AM program	20	5.3	0.0	0.0	21.1	47.4	26.3	1
The I-AM program lead at your community college	20	5.3	5.3	0.0	15.8	47.4	26.3	1
College leadership	20	0.0	0.0	10.5	26.3	47.4	15.8	1
Advisors/ navigators/career coaches/success coaches	20	0.0	0.0	5.3	15.8	52.6	26.3	1
Lead program team housed at DMACC	20	6.3	6.3	6.3	25.0	37.5	18.8	4
The students	20	0.0	0.0	5.3	10.5	47.4	36.8	1

Note: Values reflect percentages.

STRENGTHS AND CHALLENGES OF THE PROGRAM

This following section describes faculty's perceptions of strengths and challenges of the program as well as the sustainability of the project when the grant ends.

Table 21.
What are the top 3 strengths of the program?

Responses Provided	Percentage
Equipment	40.0
Industry backed/acknowledged	33.3
Options to meet student needs	26.7
Skilled Instructors	20.0
Better reference material	13.3
Connecting with students	13.3
Consistency among schools	13.3
Keeps curriculum current	13.3
Stacking credentials	13.3
Students are better prepared	13.3
Training personnel for real jobs	13.3
Working together	13.3
Hands on exercises	6.7
Just now implementing	6.7
Raises awareness	6.7
Students having the flexibility to transfer	6.7

Note: Some respondents provided multiple responses.
n=15

Table 22.
What challenges have you encountered working on this program?

Responses	Percentage
Fitting it into the program	14.3
Wrong people in lead role positions	14.3
A lot of extra time	7.1
A lot of paperwork	7.1
Correct equipment	7.1
Equipment costs are great	7.1
First time teaching new classes	7.1
Keeping up with where the school is at	7.1
Needs more structure	7.1
Schedule changes	7.1
Student and employer resistance to NIMS	7.1
Writing course guidelines	7.1

n=12

Table 23.
The program at my community college is sustainable after the grant for the I-AM program ends.

Response	Percentage
Strongly Disagree	5.6
Disagree	5.6
Neither Agree nor Disagree	27.8
Agree	22.2
Strongly Agree	38.9

n=18

Table 24.
Please indicate the extent with which you agree with each of the following statements.

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Total Agree
The Advanced Manufacturing program is beneficial for students.	18	5.6	0.0	5.6	50.0	38.9	88.9
The Advanced Manufacturing program is beneficial to my community college.	18	0.0	5.6	11.1	44.4	38.9	83.3
I am supportive of Advanced Manufacturing efforts at my community college.	18	0.0	0.0	5.6	33.3	61.1	94.4
My community college offers credit for prior learning (CPL).	18	0.0	0.0	38.9	44.4	16.7	61.1
The Advanced Manufacturing program is important for students.	18	0.0	0.0	5.6	44.4	50.0	94.4
The Advanced Manufacturing program is important to my community college.	18	0.0	0.0	5.6	44.4	50.0	94.4

Note: Values reflect percentages.

Table 25.
Please indicate the extent with which you agree with each of the following strategies identified for the Iowa Advanced Manufacturing (I-AM) program at your community college.

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	N/A	I Don't Know
Aligning curricula with relevant industry recognized certifications strengthens the program.	18	11.8	0.0	17.6	41.2	29.4	0	1
Aligning non-credit offerings with credit courses strengthens the program and benefits the students.	18	5.6	5.6	16.7	50.0	22.2	0	0
Providing credit for prior learning increases student retention.	18	5.6	0.0	22.2	66.7	5.6	0	0
Establishing AWS accredited testing facilities throughout the state is beneficial to students and my community college.	18	0.0	5.6	33.3	44.4	16.7	0	0
I feel that 3rd party certifications are a benefit to my students.	18	0.0	5.9	41.2	35.3	17.6	0	1
Developing a plan for remediation and contextualized learning helps students to be successful in the program.	18	0.0	0.0	40.0	46.7	13.3	1	2
Intense advising at my community college has helped to best match students to a program of study and educate them regarding career pathways.	18	0.0	0.0	75.0	25.0	0.0	0	2
Enhancing technology enabled learning is beneficial to my students.	18	0.0	0.0	16.7	44.4	38.9	0	0
Engaging employers, business associations, workforce development in a systematic way benefits students.	18	0.0	0.0	6.3	56.3	37.5	1	1
Engaging employers, business associations, workforce development in a systematic way benefits my community college.	18	0.0	0.0	5.9	52.9	41.2	0	1

Note: Values reflect percentages.

Appendix Q:

Committee Survey Report: Spring 2015

METHODOLOGY

The Committee Survey was distributed to members of the Advising and Enrollment, Credit for Prior Learning (CPL), Curriculum, Digital Literacy, Marketing, and National Career Readiness Certificate (NCRC) committees. At the end of October 2014, 102 committee members were asked to complete a survey regarding their committee participation, completion of deliverables and communication. The survey remained open through the end of December 2014. Sixty-seven committee members subsequently completed the survey for a total response rate of 66%. Responding committee members represented all of the community colleges. The number of responses by college ranged from one to eight committee members (see Table 1).

Table 1.
Which community college are you associated with?

Community College	Number of Respondents
Des Moines Area Community College	5
Eastern Iowa Community College	4
Hawkeye Community College	4
Iowa Central Community College	4
Indian Hills Community College	4
Iowa Lakes Community College	2
Iowa Valley Community College District	7
Iowa Western Community College	3
Kirkwood Community College	3
North Iowa Area Community College	5
Northeast Iowa Community College	7
Northwest Iowa Community College	5
Southeastern Community College	3
Southwestern Community College	1
Western Iowa Tech Community College	8

n=65

Committee members were asked to identify each committee they serve on followed by questions about the specific committees and committee deliverables.

Committee members were asked to describe each deliverable; rate their level of contribution towards the deliverable, and completeness. Committee members were asked to rate their level of

satisfaction with timeliness of deliverable, communication with other committee members, and participation in the committee. Committee members were also asked to describe strengths, weaknesses, and to suggest improvements for each committee they served on.

Committee members that indicated they were career navigators/success coaches were asked about responsibilities related to their role and about the number of students they advise. Career navigators/success coaches were asked how often information is provided to students about KeyTrain/Career Ready 101, NCRC, Credit for Prior Learning, Third Party Certifications, and Career Pathways.

Members of Credit for Prior Learning and Marketing committees were asked specific questions about training/workshops and marketing campaigns, respectively. Credit for Prior Learning Committee members were asked about the effectiveness of Advisor Training, Portfolio Workshop, Best Practices Workshop, and individual meetings with the Council for Adult and Experiential Learning (CAEL). Marketing Committee members were asked about their community college's effectiveness in marketing to the underemployed, underrepresented populations (e.g., minorities, women), unemployed, and veterans.

Implementation Analysis Research Questions

The Committee members' responses to the survey partially answers the following TAACCCT grant required research questions:

- How were programs and program design improved or expanded using grant funds?
- Did the grantees conduct an in-depth assessment of participants' abilities, skills, and interests to select participants into the grant program?

In particular, the responses regarding the completeness of the deliverables for each committee help to determine how programs and program design were improved or expanded using grant funds and responses regarding career navigators/success coaches and NCRC Committee questions help to determine the types of assessments used by community colleges. Committee member responses can be used to inform project and college leadership when making future decisions about the project.

RESULTS

Committee members surveyed were asked to identify each committee they serve on (see Table 2). Approximately one third (33.8%) of the respondents indicated that they were members of the Curriculum Committee, the Marketing Committee (32.3%), and/or the Credit for Prior Learning Committee (30.8%), 26.2% indicated that they were members of the Advising and Enrollment Committee followed by 6.2% that indicated they were members of the Digital Literacy Committee (see Table 2).

Advising and Enrollment Committee. All members of the Advising and Enrollment committee members have a familiarity with the committee's Tracking and Advising Model deliverable (see

Table 3). Just under half (46.1%) of the Advising and Enrollment committee members reported a high to very high level of contribution/active participation in the preparing/completing the deliverable (see Table 4). In contrast, 30.8% reported a moderate level of contribution/participation and 23.1% reported a low level of contribution/participation. The majority (76.9%) of the Advising and Enrollment Committee members indicated that the deliverable is in progress or close to completion (see Table 5). The remainder (23.1%) of the committee members indicated that the deliverable has been completed.

In general, committee members reported that they are satisfied with the timeliness and progress made in deliverable of the model, overall communication between committee members, and overall participation of other committee members at meetings (see Table 6). When asked about the strengths of the Advising and Enrollment Committee, over one third (38.5%) of the members indicated that committee input is valuable, 15.4% indicated that committee members were experienced, had good leadership, and were individuals dedicated to advising at their respective colleges (see Table 7). In contrast, 44.4% of committee members indicated that lack of participation or inconsistent participation by some committee members was a challenge of the committee, while 22.2% indicated that communication was a challenge (Table 8). Approximately 50.0% of the members indicated that improving communication would strengthen the committee, 25.0% indicated that better participation and a need for a statewide plan for strategic enrollment would improve the committee (see Table 9).

Approximately 13.8% of the Advising and Enrollment Committee members were also Career Navigators, Success Coaches, or Advisors (see Table 10). The number of students advised ranged from 1 to over 100 (see Table 11). The majority (83.3%) of the Career Navigators, Success Coaches, and Advisors reported that their responsibilities include monitoring student progress, 50% reported that they provide assistance and that they work with various groups (see Table 12). Approximately one third reported that their responsibilities include career pathways, creating materials, staging events, and NCRC. Advisors varied in their responses the frequency with which they provide information to students on key student components (e.g., KeyTrain/Career Ready 101, NCRC, Credit for Prior Learning, third party certification, and career pathways) of the I-AM project (see Table 13). Half of the advisors rarely provided information of KeyTrain/Career Ready101 and the other half was equally distributed between sometimes, most of the time, to always providing information on this to students. The majority (83.3%) of advisors provided NCRC information most to all of the time to their students and the remaining advisors did so some of the time. About one third (33%) of advisors provided information on credit for prior learning (CPL) and third party certifications to their students, 50% provided it sometimes, and the remaining 16.7% rarely provided information in these areas. Half (50%) of the advisors reported that they always provided information on career pathways to students, 33.3% reported that they sometimes provided this information and the remaining 16.7% reported that they rarely share this information with students (see Table 13).

Credit for Prior Learning (CPL) Committee. In general, the majority (89.5%) of the CPL committee members were familiar with the committee's two deliverables: updated CPL policies and updated CPL processes (see Table 14). The majority (66.6%) of CPL committee members

indicated a high to very high level of contribution/active participation updating CPL policies and 72.2% indicated a high to very high level of contribution/active participation updating CPL processes (Table 15). Committee members were asked to rate the level of effectiveness of various meetings in providing information for updating CPL policies and processes (see Table 16). The majority of CPL committee members indicated that portfolio and best practices workshops (61.5% and 65.3% respectively) were effective. In contrast, committee members were evenly split on the effectiveness of advisor training and individual meeting with CAEL. Half of the members thought they were effective while the other half thought that they were neutral on their effectiveness (see Table 16).

Over one-third (38.9%) of CPL committee members were either close to completion or have completed updating CPL policies and processes at their respective colleges (see Table 17). Over one-third of CPL committee members reported that their respective colleges were in the process of updating CPL policies (39%) and CPL processes (44.4%). The remainder indicated that they had just started updating CPL policies (16.7%) and CPL processes (11.1%) or had not yet started (5.6%). In general, CPL committee members are satisfied or very satisfied with 1) timeliness and progress in delivery of updated CPL policies (72.2%); 2) timeliness and progress in delivery of update CPL processes (72.2%); 3) overall communication between CPL committee members (83.4%); 4) their participation in CPL committee meetings (72.2%); and 5) overall participation of other committee members in meetings (72.2%; see Table 18). The remaining members for the most part were neither satisfied nor dissatisfied with these areas.

When asked to describe the strengths of the CPL committee, 50% of the members described willingness to share/learn; 27.8% indicated that the members were knowledgeable and experienced; 16% indicated good leadership, and 11.1% report that the committee was a good resource (see Table 19). Approximately 41.7% of the members indicated that updating CPL is a difficult process; 25.0% indicated lack of participation was problematic; and 16.7% thought that conference calls were not set up on a regular basis (see Table 20). A few members indicated that they would have liked to see more examples of policy/processes and they would have preferred less reliance on the CAEL (see Table 21).

Curriculum Committee. The majority (89.5%) of the committee members are familiar with the committee's six deliverables: audited and aligned curricula; certified instructors; updated training facilities; online and blended option; shared core curriculum; and career pathways (see Table 22). Overall, committee members reported that they had a high to very high level of contribution/active participation in completing five of the committee's six deliverables: audited and aligned curricula (73.7%); certified instructors (63.1%); updated training facilities (73.7%); shared core curriculum (68.4%); and career pathways (84.2%; see Table 23). Only 26.3% of the members reported a high to very high level of contribution/active participation in completion of the online and blended option deliverable. The remaining committee members reported that their contribution was either moderate (36.8%) or low (31.6%).

Overall, committee members reported that four of the six deliverables were close to completion or have been completed: audited and aligned curricula (68.5%); certified instructors (57.9%);

updated training facilities (84.2%); and career pathways (57.9%; see Table 24). Shared core curriculum was 47.4% close to completion or completion, while only 31.6% were close to completion or had completed the online and blended option deliverable.

In general, committee members were satisfied or very satisfied with timeliness and progress with each of the six committee deliverables: audited and aligned curricula (63.1%); certified instructors (63.1%); updated training facilities (84.2%); online and blended option (52.7%); shared core curriculum (63.2%); and career pathways (68.4%; see Table 25). Committee members were also satisfied or very satisfied with communication between members of the committee (84.2%), and their participation in meetings (73.7%), and overall participation of other members (63.1%).

Approximately one-third (37.5%) of the committee members identified knowledge as a strength, 25.0% identified welding SENSE alignment, 18.8% identified collaboration and diversity of the group as strengths (see Table 26). Approximately one-half (50.0%) reported that adopting changes was a weakness of the committee, while 16.7% reported that diversity of the programs and member engagement were weaknesses (see Table 27). A few committee members (30.0%) suggested more face-to-face meetings, 20% suggested increasing regular participation and continued backing of leadership (see Table 28) would improve/strengthen the curriculum committee.

Digital Literacy Committee. The majority (75%) of Digital Literacy Committee members were familiar with the committee's statewide digital literacy strategy deliverable (see Table 29) and reported a moderate to high level of contribution/active participation in completing the statewide digital literacy strategy (see Table 30). The majority (75%) of members reported that the deliverable was in progress while 25% reported that it was close to completion (see Table 31).

The majority (75%) of Digital Literacy Committee members reported that they were neutral regarding their level of satisfaction on the timeliness and progress made in completion of their deliverable, while 25% reported that they were satisfied (see Table 32). The majority (75%) of members were also satisfied with the overall communication between members of the committee and their participation at meetings.

One-third (33.3%) of committee members identified collaboration, experience and distinguishing between digital and computer literacy as strengths (see Table 33). In contrast, 50.0% identified resistance to change and trying to get people interested as weaknesses of the committee (see Table 34). A possible improvement suggested by a member of the committee was visiting other institutions to share best practices (see Table 35).

Marketing Committee. The majority (70.6%) of Marketing Committee members were familiar with the committee's three deliverables: statewide marketing plan, regional marketing plan, and employment and career website (see Table 36). The remaining (29.4%) committee members were not familiar with these deliverables.

In general, the level of contribution/active participation varied more than what members from other committees reported (see Table 37). Over half (53.%) of the participants reported that their contribution/active participation on the statewide marketing plan deliverable was very low to low, 23.5% reported that it was moderate and 23.6% reported that their level of contribution/active participation was high to very high. A similar pattern was reported for the employment and career website with over half (58.9%) reporting that their contribution/active participation on this deliverable was very low to low, 17.6% reported that their contribution/active participation was moderate, and 23.5% reported that it was high to very high. Just under half (47%) of the members reported high to very high contributions/active participation on the regional marketing plan deliverable, while 17.6% reported moderate contribution/active participation, and 35.3% reported very low to low contribution/active participation in completing this deliverable (see Table 37).

The majority of committee members reported that the statewide marketing plan and regional marketing plan (64.7%, 58.5% respectively) was in progress, 29% reported that it was close to completion or complete, and the remaining (5.9%, 11.8% respectively; see Table 38) members reported that it had not yet started. Less than half (41.2%) of the members reported that the employment and career website deliverable was in progress, 35.2% reported that it was close to completion or complete, and the remaining members (23.5%) reported that it had not yet started or it had just started.

The majority of members reported that their respective community colleges were effective to very effective at marketing to underemployed and underrepresent populations (64%), and unemployed (80%; see Table 39). Approximately 20% were neutral with regarding to effective of marketing to underemployed, 24% were neutral on effectiveness of marketing to underrepresented populations, and 12% were neutral on effectiveness of marketing to unemployed. Just under half (48%) of the members indicated that marketing to veterans was either effective or highly effective, 40% were neutral on the effectiveness of marketing to veterans, and 12% thought marketing to veterans was ineffective or very ineffective.

Overall, the majority of Marketing Committee members were satisfied or very satisfied with the timeliness and progress made with each of their deliverables: statewide marketing plan (76.5%); regional marketing plan (70.6%); employment and career website (64.7%; see Table 40). The remaining members were neutral with regards to timeliness and progress made. The majority of Marketing Committee members were also satisfied or very satisfied with overall communication between members of the marketing committee (76.5%); their own participation in meetings (64.7%); and the overall participation of other committee members in meetings (64.7%).

Almost one-half (46.2%) reported that great leadership was a strength of the committee (see Table 41). Almost one-third (30.8%) thought resources was a strength, and 15.4% reported a great partnership with ABI and regular meetings as strengths. Approximately 18.2% of the members identified the following weakness: everyone not on board; plans do not fit every school; statewide versus regional; and too many hoops to jump through for DOL money (see Table 42). Almost half (44.4%) of the committee members responding to the survey suggested

that better communication and more collaboration, addressing issues, and more one-on-one meetings would strengthen the Marketing Committee (see Table 43).

NCRC Committee. The NCRC Committee initially began working as a committee in response to the Tomorrow's Workforce Now initiative designed to improve the workforce by providing tools such as the National Career Readiness Certificate (NCRC). However, the focus of the committee has changed over time causing some confusion with regards to committee deliverables and tasks. The committee's initial focus was geared more towards NCRC testing, however the committee was later tasked with working through additional deliverables such as KeyTrain, Career Ready 101, and training job profilers for the I-AM grant. By the time the survey was administered to NCRC committee members, the committee had become less active and had discontinued meeting on a regular basis.

The majority of (71.4%) of the NCRC Committee members were familiar with two of the committee's following deliverables: incorporate NCRC into curricula; strengthen relationship with workforce and industry (see Table 44a). However, only 28.6% of committee members surveyed were as familiar with the following deliverables: train grant job profiler; pilot KeyTrain, pilot Career Ready 101 (see Table 44b).

With the exception of the training a grant job profiler deliverable, the majority (71.5% - 85.8%) committee members rated their contribution or participation as moderate to high for the remaining deliverables (see Table 45). Approximately 57.2% of committee members indicated that three of the five deliverables, incorporate NCRC into curricula, strengthen relationship with workforce and industry, pilot Career Ready 101 are either close to completion or have been completed at their respective community colleges (see Table 46). Just under half (42.9%) of the members indicated that the remaining two deliverables, training a grant job profiler and pilot KeyTrain are close to completion or have been completed (see Table 46).

Overall, the majority of NCRC Committee members were satisfied or very satisfied with the timeliness and progress made with each of the following deliverables: incorporate NCRC into curricula (66.7%), strengthen relationship with workforce and industry (83.4%), train grant profiler (50%), pilot KeyTrain (66.7%), and pilot Career Ready 101 (66.7%; see Table 47). Members were less satisfied with regards to communication and participation within the committee. Only one-third (33.3%) of the members indicated that they were satisfied with overall communication between members of the committee, one-third (33.3%) was neither satisfied nor dissatisfied, and one-third (33.3%) indicated that they were dissatisfied. Only one-third of the members were satisfied with either their participation in meetings or overall participation by committee members, half (50%) of the members were neither satisfied nor dissatisfied and the remaining one-third (33.3%) indicated they were very dissatisfied with level of participation (see Table 47).

Approximately 60.0% of the members indicated that having people that are experienced and knowledgeable on the committee was a strength of the committee (see Table 48). One-fifth (20.0%) thought the committee was strong because it was a major portion of the I-AM program

and because it was incorporated statewide. Because the committee is no longer meeting, two-thirds (66.7%) thought this presented a challenge (see Table 49). Approximately 33.3% of the members indicated that not embedding NCRC into the curriculum was also a challenge or weakness. Committee members indicated that regular communication and development of a sustainability processes would improve the committee (see Table 50).

Results are presented in the following sections: Committee Identification, Advising and Enrollment Committee, Advising and Enrollment Committee – Career Navigator/Success Coach/Advisor Role, CPL Committee, Curriculum Committee, Digital Literacy Committee, Marketing Committee, and NCRC Committee.

COMMITTEE IDENTIFICATION

Respondents were asked to identify which I-AM committees they served on.

Table 2.
Which committee(s) do you serve on?

Committee	Percentage
Advising and Enrollment	26.2
CPL	30.8
Curriculum	33.8
Digital Literacy	6.2
Marketing	32.3
NCRC	16.9

Note: The percentages do not add up to 100%.
n=65

ADVISING AND ENROLLMENT COMMITTEE

The next set of questions focuses on the Advising and Enrollment Committee, its deliverables, committee participation and communication between members.

Table 3.
Please describe each deliverable the Advising and Enrollment Committee is addressing/ working on.

The intent of this question was to determine committee members' familiarity with Advising and Enrollment deliverables. This open-ended question provided committee members with more flexibility to respond regarding the deliverables they worked on. All responses were recoded to yes/no/not applicable to reflect their familiarity with deliverables.

Familiar	Percentage
Yes	100.0
No	0.0
Not Applicable	0.0

n=13
Responses for "Not Applicable": None

Table 4.
In general, how would you describe your level of contribution/active participation to the following deliverable:

Statement	*n*	Very Low	Low	Moderate	High	Very High
Tracking and Advising Model	13	0.0	23.1	30.8	38.5	7.6

Note: Values reflect percentages.

Table 5.
How complete is the Advising and Enrollment Committee's deliverable?

Statement	*n*	Not Started	Just Started	In Progress	Close to Completion	Complete
Tracking and Advising Model	13	0.0	0.0	46.1	30.8	23.1

Note: Values reflect percentages.

Table 6.
How satisfied are you with each of the following statements?

Statement	*n*	Very Dissatisfied	Dissatisfied	Neither Dissatisfied nor Satisfied	Satisfied	Very Satisfied
Timeliness and progress in delivery of: Tracking and Advising Model	13	0.0	7.7	7.7	76.9	7.7
Overall communication between members of the Advising and Enrollment Committee	13	7.7	0.0	30.8	61.5	0.0
Your participation in Advising and Enrollment Committee meetings	13	0.0	0.0	30.8	69.2	0.0
The overall participation of other committee members in Advising and Enrollment Committee meetings	13	0.0	0.0	38.5	61.5	0.0

Note: Values reflect percentages.

Table 7.
Please describe the strengths of the Advising and Enrollment Committee.

Responses Provided	Percentage
Input from the committee is valuable	38.5
Committee members are very experienced	15.4
Good leadership	15.4
People dedicated to advising at each community college	15.4
Communication	7.7
Creative and adaptive	7.7
That a committee has been formed	7.7
Too new to the grant	7.7

Note: Some respondents provided multiple responses.
n=13

Table 8.
Please describe the weaknesses of the Advising and Enrollment Committee.

Responses Provided	Percentage
Lack of participation/inconsistent participation	44.4
Communication	22.2
Need less emphasis on the advising model	11.1
Need phone call conferences	11.1
Not everyone is forthcoming with ideas/practices	11.1

Note: Some respondents provided multiple responses.
n=9

Table 9.
What improvements could be made to strengthen the Advising and Enrollment Committee?

Responses Provided	Percentage
Improve communication	50.0
Better overall participation	25.0
Need a statewide plan for strategic enrollment	25.0

n=4

ADVISING AND ENROLLMENT COMMITTEE – CAREER NAVIGATOR/SUCCESS COACH/ADVISOR ROLE

The focus of the following section is on the advisors/career navigators/success coaches in the Advanced Manufacturing project, their duties and the frequency/types of information/help they provide to students they serve.

Table 10.
Are you a Career Navigator/Success Coach/Advisor?

Career Navigator/Success Coach/Advisor	Percentage
Yes	13.8
No	86.2

n=65

Table 11.
Approximately how many students do you advise?

Number of advised students	Percentage
1-20 students	16.7
21-50 students	16.7
51-80 students	33.3
81-100 students	16.7
100 or more students	16.7
None	0.0

n=6

Table 12.
Please describe your responsibilities/duties as Career Navigator/Success Coach/Advisor.

Responses Provided	Percentage
Student progress	83.3
Providing assistance	50.0
Work with various groups	50.0
Career pathways	33.3
Creating materials	33.3
NCRC	33.3
Staging events	33.3
Oversee program	16.7

Note: Some respondents provided multiple responses.
n=6

Table 13.
How often do you provide information to students about any of the following?

Resources	*n*	Never	Rarely	Sometimes	Most of the Time	Always	Not Applicable
KeyTrain/ Career Ready 101	6	0.0	50.0	16.7	16.7	16.7	0
NCRC	6	0.0	0.0	16.7	33.3	50.0	0
Credit for Prior Learning	6	0.0	16.7	50.0	0.0	33.3	0
Third Party Certifications	6	0.0	16.7	50.0	0.0	33.3	0
Career Pathways	6	0.0	16.7	33.3	0.0	50.0	0

Note: Values reflect percentages.

CPL COMMITTEE

The focus of following section is on the Credit for Prior Learning (CPL) Committee, its deliverables, and participation and communication between its members.

Table 14.
Please describe each deliverable the CPL Committee is addressing/working on.

The intent of this question was to determine committee members' familiarity with CPL Committee deliverables. This open-ended question provided committee members with more flexibility to respond regarding the deliverables they worked on. All responses were recoded to yes/no/not applicable to reflect their familiarity with deliverables.

Familiar	Percentage
Yes	89.5
No	0.0
Not Applicable	10.5

n=19
Responses for "Not Applicable": Not on committee (1)
I-AM project director will complete this section (1)

Table 15.
In general, describe your level of contribution/active participation, at your community college, to the following deliverables:

Statements	*n*	Very Low	Low	Moderate	High	Very High
Updated CPL policies	18	5.6	5.6	22.2	22.2	44.4
Updated CPL processes	18	5.6	11.1	11.1	27.8	44.4

Note: Values reflect percentages.

Table 16.
How effective have the following meetings been in providing information for updating CPL policies and processes?

Statements	*n*	Very Ineffective	Ineffective	Neither Effective nor Ineffective	Effective	Very Effective
Advisor Training	26	3.8	0.0	46.2	50.0	0.0
Portfolio Workshop	26	0.0	3.8	34.7	57.7	3.8
Best Practices Workshop	26	0.0	0.0	34.7	53.8	11.5
Individual Meetings with CAEL	26	3.8	0.0	46.2	46.2	3.8

Note: Values reflect percentages.

Table 17.
How complete is the each of the CPL Committee's deliverables at your community college?

Statements	*n*	Not Started	Just Started	In Progress	Close to Completion	Complete
Updated CPL policies	18	5.6	16.7	39.0	22.2	16.7
Updated CPL processes	18	5.6	11.1	44.4	27.8	11.1

Note: Values reflect percentages.

Table 18.
How satisfied are you with each of the following statements?

Statements	*n*	Very Dissatisfied	Dissatisfied	Neither Dissatisfied nor Satisfied	Satisfied	Very Satisfied
Timeliness and progress in delivery of: Updated CPL policies at my community college	18	0.0	0.0	27.8	61.1	11.1
Timeliness and progress in delivery of: Updated CPL processes at my community college	18	0.0	5.6	22.2	61.1	11.1
Overall communication between members of the CPL Committee	18	0.0	0.0	16.6	77.8	5.6
Your participation in CPL Committee meetings	18	0.0	5.6	22.2	61.1	11.1
The overall participation of other committee members in CPL Committee meetings	18	0.0	0.0	27.8	61.1	11.1

Note: Values reflect percentages.

Table 19.
Please describe the strengths of the CPL Committee.

Responses	Percentage
Willing to share/learn	50.0
Knowledgeable/experienced	27.8
Good leadership	16.7
Good resource	11.1
Flexibility	5.6
Focused	5.6
Great next step	5.6
Opportunities to discuss issues	5.6
Understanding of need	5.6

Note: Some respondents provided multiple responses.
n=17

Table 20.
Please describe the weaknesses of the CPL Committee.

Responses	Percentage
Updating CPL is a difficult process	41.7
Lack of participation	25.0
Conference calls not on a regular basis	16.7
Need a better description of what is expected	8.3
Too heavily invested in CAEL	8.3

n=12

Table 21.
What improvements could be made to strengthen the CPL Committee?

Responses	Percentage
More examples of policy/process	60.0
Less reliance on CAEL	40.0

n=5

CURRICULUM COMMITTEE

This section centers on the Curriculum Committee. Specifically, questions about the deliverables, participation, and communication are asked.

Table 22.
Please describe each deliverable the Curriculum Committee is addressing/working on.

The intent of this question was to determine committee members' familiarity with Curriculum Committee deliverables. This open-ended question provided committee members with more flexibility to respond regarding the deliverables they worked on. All responses were recoded to yes/no/not applicable to reflect their familiarity with deliverables.

Familiar	Percentage
Yes	89.5
No	0.0
Not Applicable	10.5

Note: Most of the deliverables focused on welding.
n=19
Responses for "Not Applicable": Indicated he/she should not be on committee (2)

Table 23.
In general, describe your level of contribution/active participation, at your community college, to the following deliverables:

Statements	*n*	Very Low	Low	Moderate	High	Very High
Audited and aligned curricula	19	5.3	5.3	15.8	26.3	47.4
Certified instructors	19	0.0	15.8	21.1	36.8	26.3
Updated training facilities	19	0.0	5.3	21.1	47.4	26.3
Online and blended option	19	5.3	31.6	36.8	15.8	10.5
Shared core curriculum	19	0.0	21.1	10.5	57.9	10.5
Career Pathways	19	5.3	5.3	5.3	42.1	42.1

Note: Values reflect percentages.

Table 24.
How complete is each of the Curriculum Committee's deliverables at your community college?

Statements	*n*	Not Started	Just Started	In Progress	Close to Completion	Complete
Audited and aligned curricula	19	0.0	0.0	31.6	47.4	21.1
Certified instructors	19	5.3	5.3	31.6	26.3	31.6
Updated training facilities	19	5.3	0.0	10.5	52.6	31.6
Online and blended options	19	21.1	10.5	36.8	5.3	26.3
Shared core curriculum	19	0.0	10.5	42.1	31.6	15.8
Career Pathways	19	0.0	0.0	42.1	21.1	36.8

Note: Values reflect percentages.

Table 25.
How satisfied are you with each of the following statements?

Statements	*n*	Very Dissatisfied	Dissatisfied	Neither Dissatisfied nor Satisfied	Satisfied	Very Satisfied
Timeliness and progress in delivery of: Audited and aligned curricula at my community college	19	5.3	5.3	26.3	52.6	10.5
Timeliness and progress in delivery of: Certified instructors at my community college	19	0.0	5.3	31.6	36.8	26.3
Timeliness and progress in delivery of: Updated training facilities at my community college	19	0.0	5.3	10.5	42.1	42.1
Timeliness and progress in delivery of: Online and blended options at my community college	19	5.3	26.3	15.8	47.4	5.3
Timeliness and progress in delivery of: Shared core curriculum at my community college	19	5.3	0.0	31.6	47.4	15.8
Timeliness and progress in delivery of: Career pathways at my community college	19	0.0	10.5	21.1	36.8	31.6
Overall communication between members of the Curriculum Committee	19	0.0	0.0	15.8	73.7	10.5
Your participation in Curriculum Committee meetings	19	5.3	5.3	15.8	52.6	21.1
The overall participation of other committee members in Curriculum Committee meetings	19	0.0	0.0	36.8	52.6	10.5

Note: Values reflect percentages.

Table 26.
Please describe the strengths of the Curriculum Committee.

Responses Provided	Percentage
Knowledge	37.5
Welding SENSE alignment	25.0
Collaboration	18.8
Diversity of the group	18.8
Goals/Timelines	6.3
Good communication	6.3
Great leadership	6.3

Note: Some respondents provided multiple responses.
n=16

Table 27.
Please describe the weaknesses of the Curriculum Committee.

Responses Provided	Percentage
Issues adopting changes	50.0
Diversity of the programs	16.7
Engagement of members	16.7
Meetings redundant	8.3
Started off slow	8.3
Too much focus on SENSE alignment	8.3

Note: Some respondents provided multiple responses.
n=12

Table 28.
What improvements could be made to strengthen the Curriculum Committee?

Responses Provided	Percentage
More face-to-face meetings	30.0
Continued backing of leadership	20.0
Regular participation	20.0
Consistent SharePoint site	10.0
Create full process documentation	10.0
More local industry input	10.0
Utilize time better	10.0
Visit other institutions to share best practices	10.0

Note: Some respondents provided multiple responses.
$n=10$

DIGITAL LITERACY COMMITTEE

The section centers on the Digital Literacy Committee. Specifically, questions about the deliverables, participation, and communication are asked.

Table 29.
Please describe each deliverable the Digital Literacy Committee is addressing/ working on.

The intent of this question was to determine committee members' familiarity with Digital Literacy Committee deliverables. This open-ended question provided committee members with more flexibility to respond regarding the deliverables they worked on. All responses were recoded to yes/no/not applicable to reflect their familiarity with deliverables.

Familiar	Percentage
Yes	75.0
No	0.0
Not Applicable	25.0

n=4
Responses for "Not Applicable": Indicated he/she should not be on committee (1)

Table 30.
In general, how would you describe your level of contribution/active participation to the following deliverable:

Statement	*n*	Very Low	Low	Moderate	High	Very High
Statewide digital literacy strategy	4	25.0	0.0	50.0	25.0	0.0

Note: Values reflect percentages.

Table 31.
How complete is the Digital Literacy Committee's deliverable?

Statement	*n*	Not Started	Just Started	In Progress	Close to Completion	Complete
Statewide digital literacy strategy	4	0.0	0.0	75.0	25.0	0.0

Note: Values reflect percentages.

Table 32.
How satisfied are you with each of the following statements?

Statement	*n*	Very Dissatisfied	Dissatisfied	Neither Dissatisfied nor Satisfied	Satisfied	Very Satisfied
Timeliness and progress in delivery of: Statewide digital literacy strategy	4	0.0	0.0	75.0	25.0	0.0
Overall communication between members of the Digital Literacy Committee	4	0.0	0.0	25.0	75.0	0.0
Your participation in Digital Literacy Committee meetings	4	25.0	0.0	0.0	75.0	0.0
The overall participation of other committee members in Digital Literacy Committee meetings	4	0.0	0.0	50.0	50.0	0.0

Note: Values reflect percentages.

Table 33.
Please describe the strengths of the Digital Literacy Committee.

Responses	Percentage
Collaboration	33.3
Experience	33.3
Distinction between digital and computer literacy	33.3

n=3

Table 34.
Please describe the weaknesses of the Digital Literacy Committee.

Responses	Percentage
Get more people interested	50.0
Resistance to change	50.0

n=2

Table 35.
What improvements could be made to strengthen the Digital Literacy Committee?

Responses	Percentage
Visit other institutions to share best practices	100.0

n=1

MARKETING COMMITTEE

This section centers on the Marketing Committee. Specifically, questions about the deliverables, participation, and communication are asked.

Table 36.
Please describe each deliverable the Marketing Committee is addressing/working on.

The intent of this question was to determine committee members' familiarity with Marketing Committee deliverables. This open-ended question provided committee members with more flexibility to respond regarding the deliverables they worked on. All responses were recoded to yes/no/not applicable to reflect their familiarity with deliverables.

Familiar	Percentage
Yes	70.6
No	29.4
Not Applicable	0.0

n=17
Responses for "Not Applicable": None

Table 37.
In general, how would you describe your level of contribution/active participation to the following deliverables:

Statements	*n*	Very Low	Low	Moderate	High	Very High
Statewide marketing plan	17	11.8	41.2	23.5	11.8	11.8
Regional marketing plan	17	11.8	23.5	17.6	29.4	17.6
Employment and career website	17	11.8	47.1	17.6	17.6	5.9

Note: Values reflect percentages.

Table 38.
How complete is each of the Marketing Committee's deliverables?

Statements	*n*	Not Started	Just Started	In Progress	Close to Completion	Complete
Statewide marketing plan	17	5.9	0.0	64.7	17.6	11.8
Regional marketing plan	17	11.8	0.0	58.8	17.6	11.8
Employment and career website	17	17.6	5.9	41.2	17.6	17.6

Note: Values reflect percentages.

Table 39.
How effective is your community college's ability to market to the different groups with the DOL grant money received as part of the Advanced Manufacturing grant?

Statements	*n*	Very Ineffective	Ineffective	Neither Effective nor Ineffective	Effective	Very Effective
Underemployed	25	4.0	12.0	20.0	56.0	8.0
Underrepresented populations	25	4.0	8.0	24.0	60.0	4.0
Unemployed	25	4.0	4.0	12.0	64.0	16.0
Veterans	25	4.0	8.0	40.0	44.0	4.0

Note: Values reflect percentages.

Table 40.
How satisfied are you with each of the following statements?

Statements	*n*	Very Dissatisfied	Dissatisfied	Neither Dissatisfied nor Satisfied	Satisfied	Very Satisfied
Timeliness and progress in delivery of: Statewide marketing plan	17	0.0	5.9	17.6	70.6	5.9
Timeliness and progress in delivery of: Regional marketing plan	17	0.0	5.9	23.5	58.8	11.8
Timeliness and progress in delivery of: Employment and career website	17	0.0	5.9	29.4	52.9	11.8
Overall communication between members of the Marketing Committee	17	0.0	0.0	23.5	70.6	5.9
Your participation in Marketing Committee meetings	17	0.0	5.9	29.4	64.7	0.0
The overall participation of other committee members in Marketing Committee meetings	17	0.0	5.9	29.4	64.7	0.0

Note: Values reflect percentages.

Table 41.
Please describe the strengths of the Marketing Committee.

Responses	Percentage
Great leadership	46.2
Resources	30.8
Great partnership with ABI	15.4
Regular meetings	15.4
Good communication	7.7
Good cross section	7.7
Good organization	7.7
Great think tank	7.7

Note: Some respondents provided multiple responses.
n=13

Table 42.
Please describe the weaknesses of the Marketing Committee.

Responses	Percentage
Everyone is not on board	18.2
Plans do not fit every school	18.2
Statewide versus regional	18.2
Too many hoops to jump through for the DOL money	18.2
Centered too much on central Iowa	9.1
More collaboration	9.1
More openness is needed	9.1
Not sure it is the right people	9.1

Note: Some respondents provided multiple responses.
n=11

Table 43.
What improvements could be made to strengthen the Marketing Committee?

Responses	Percentage
Better communication	44.4
Address issues	11.1
Make it easier to use the money	11.1
More collaboration	11.1
More focus on the border schools	11.1
More one-on-one meetings	11.1
Push importance to the presidents	11.1

Note: Some respondents provided multiple responses.
n=9

NCRC COMMITTEE

The following section focuses on the NCRC committee, its deliverables, committee participation and communication.

Table 44a.
Familiarity with "incorporate NCRC into curricula, Strengthen relationship with workforce and industry" deliverable.

Familiar	Percentage
Yes	71.4
No	0.0
Not Applicable	28.6

n=7
Responses for "Not Applicable": Indicated he/she should not be on committee (2)

Table 44b.
Familiarity with "train grant job profiler, Pilot KeyTrain, Pilot Career Ready 10" deliverable.

Familiar	Percentage
Yes	28.6
No	42.8
Not Applicable	28.6

n=7
Responses for "Not Applicable": Indicated he/she should not be on committee (2)

Table 45.
In general, how would you describe your level of contribution/active participation to the following deliverables:

Statements	*n*	Very Low	Low	Moderate	High	Very High
Incorporate NCRC into curricula	7	14.3	14.3	42.9	28.6	0.0
Strengthen relationship with workforce and industry	7	14.3	0.0	42.9	28.6	14.3
Train grant job profiler	7	57.1	14.3	14.3	14.3	0.0
Pilot KeyTrain	7	28.6	0.0	42.9	28.6	0.0
Pilot Career Ready 101	7	14.3	0.0	42.9	42.9	0.0

Note: Values reflect percentages.

Table 46.
How complete is each of the NCRC Committee's deliverables?

Statements	*n*	Not Started	Just Started	In Progress	Close to Completion	Complete
Incorporate NCRC into curricula	7	0.0	14.3	28.6	28.6	28.6
Strengthen relationship with workforce and industry	7	0.0	0.0	42.9	42.9	14.3
Train grant job profiler	7	28.6	0.0	28.6	0.0	42.9
Pilot KeyTrain	7	14.3	14.3	28.6	14.3	28.6
Pilot Career Ready 101	7	0.0	0.0	42.9	28.6	28.6

Note: Values reflect percentages.

Table 47.
How satisfied are you with each of the following statements?

Statements	*n*	Very Dissatisfied	Dissatisfied	Neither Dissatisfied nor Satisfied	Satisfied	Very Satisfied
Timeliness and progress in delivery of: Incorporate NCRC into curricula	6	0.0	16.7	16.7	50.0	16.7
Timeliness and progress in delivery of: Strengthen relationship with workforce and industry	6	0.0	0.0	16.7	66.7	16.7
Timeliness and progress in delivery of: Train grant job profiler	6	33.3	16.7	0.0	33.3	16.7
Timeliness and progress in delivery of: Pilot KeyTrain	6	0.0	0.0	33.3	50.0	16.7
Timeliness and progress in delivery of: Pilot Career Ready 101	6	0.0	16.7	16.7	50.0	16.7
Overall communication between members of the NCRC Committee	6	16.7	16.7	33.3	33.3	0.0
Your participation in NCRC Committee meetings	6	16.7	0.0	50.0	33.3	0.0
The overall participation of other committee members in NCRC Committee meetings	6	16.7	0.0	50.0	33.3	0.0

Note: Values reflect percentages.

Table 48.
Please describe the strengths of the NCRC Committee.

Responses	Percentage
Experienced/knowledgeable people	60.0
Major part of I-AM	20.0
Statewide incorporation	20.0

n=5

Table 49.
Please describe the weaknesses of the NCRC Committee.

Responses	Percentage
No longer meeting	66.7
Not embedded into curriculum	33.3

n=3

Table 50.
What improvements could be made to strengthen the NCRC Committee?

Responses	Percentage
Regular communication	50.0
Develop sustainability processes	25.0
Inclusion of NCRC not important at this stage	25.0

n=4

Appendix R:

Credit for Prior Learning Committee Survey Report: Fall 2015

METHODOLOGY

The Credit for Prior Learning Committee Survey was distributed to 28 members of the Credit for Prior Learning Committee in October 2015. The survey was developed to access members' views about the CPL committee and their thoughts about CPL practices at their respective community colleges. The survey had a good response rate (67.9%) with a total of 19 committee members representing 12 of the 15 Iowa community colleges (see Table 1).

Table 1.
Which community college are you associated with?

Community College	Number of Respondents
Des Moines Area Community College	2
Eastern Iowa Community College	1
Hawkeye Community College	1
Iowa Central Community College	2
Indian Hills Community College	1
Iowa Lakes Community College	0
Iowa Valley Community College District	1
Iowa Western Community College	1
Kirkwood Community College	2
North Iowa Area Community College	2
Northeast Iowa Community College	1
Northwest Iowa Community College	1
Southeastern Community College	4
Southwestern Community College	0
Western Iowa Tech Community College	0

n=19

To assess committee members' level of familiarity with CPL Committee deliverables, members were asked to describe the goals of the CPL committee as if they were describing it to someone who was not familiar with the goal. Committee members were asked about current Prior Learning Assessment (PLA) practices at their community colleges. Specifically, they were asked whether various PLA practices were used and to indicate how students were made aware of the PLA practices.

A series of questions regarding current CPL policies were developed to determine whether any policies had been changed at their respective community colleges as a result of the I-AM project. Respondents that indicated changes had been made were asked to provide description of the changes. In contrast respondents that indicated no changes had been made were asked to describe why their community college had not made changes. Respondents were asked to describe resources they used in partnering with other community colleges in their examination of CPL policies.

Committee members were asked to rate the usefulness of various workshop/training opportunities provided in developing/updating CPL policies and processes at their respective community colleges. Committee members were asked to whether they agreed that updated CPL practices had an impact on their respective community colleges and students, whether they agreed that the updates will be sustained when the project ends in September, 2016 and whether they agreed that their community college would benefit by continuing their collaboration with the Iowa IHUM Project (Round 4 DOL TAACCCT Grant).

Committee members were asked to share any final thoughts regarding lessons learned relative to the strengthening of CPL policies/practices. In particular, they were asked to share what worked and whether they would make any changes.

Implementation Analysis Research Question

Committee member responses to the survey partially answers the following TAACCCT grant required research question:

- Did the grantees conduct an in-depth assessment of participants' abilities, skills, and interests to select participants into the grant program?

In particular, committee member responses regarding the Prior Learning Assessment practices at each community college provides information about the various types of Prior Learning Assessment practices conducted at each community college and how the students at those community colleges are made aware of these resources. Information regarding the types of assessments utilized can be used to inform community college leadership when making decision regarding in-depth assessments of their students' abilities and skills.

RESULTS

Perceived Goals of the Credit for Prior Learning (CPL) Committee. When committee members were asked to describe the goals of the Credit for Prior Learning (CPL) committee, almost half (46.7%) the members indicated that the goal of the committee was for students to be able to receive credit for their prior experiences. Others goals included reviewing and updating CPL policies and procedures (26.7%), identifying available CPL options (13.3%), and the development or establishment of a CPL process/framework (13.3%; see Table 2).

Prior Learning Assessment Practices and Students Awareness. Committee members were asked whether their respective community colleges offered various Prior Learning Assessment

practices (e.g., CLEP, Portfolio Review) and how students were made aware of each of those practices (see Table 3). All (100%) of respondents indicated CLEP is offered and students are made aware of CLEP by looking at the website (82.4%) or asking for it (76.5%). A majority of the respondents (94.1%) indicated they offer military transcript evaluation, non-credit to credit, and test-out exams. For the military transcript evaluation, students either have to ask for it (58.8%) or there is information on the website (52.9%). For the non-credit to credit, students either have to ask for it (47.1%), the advisor offers (41.2%), or there is information on the website (41.2%). For the test-out exams, the student has to ask for it (76.5%) or there is information on the website (41.2%). Other Prior Learning Assessment practices used at the community colleges include: Advanced Placement Exam (82.4%), License or Credential for Credit (82.4%), Portfolio Review (70.6%), and Credit for Experiential Learning (70.6%; see Table 3).

Changes made to CPL Policies/Practices as a Result of I-AM Project. When asked whether their community college had made any changes to its CPL policies or practices as a result of the I-AM project, the majority (88.2%) of the members reported that they had made either minor (29.4%), moderate (35.3%) or extensive (23.5%) changes (see Table 4). In contrast, 11.8% indicated that no changes had been made (see Table 4).

Members described various changes made to CPL policies/practices at their community colleges (see Table 5). Some changes include added/revised portfolios (26.7%), added 3rd party credentials (13.3%), expanded military transcript evaluation (13.3%), finalized/updated process and forms (13.3%), information about CPL policy is now in the handbook (13.3%), and a non-credit to credit crosswalk (13.3%; see Table 5). One member reported that already had policies in place therefore they have not made any changes; while another member reported that they have a district-wide committee in the process of rewriting the manual at their community college.

Partnering with other Iowa Community Colleges and Utilization of Resources in Development of CPL policies/practices. A majority (58.8%) of the respondents indicated their community college partnered with or used resources from another Iowa community college (see Table 7). Members identified various resources used to develop/update their CPL policies, including: attending conferences, creation of matrices of CPL practices at all Iowa community colleges, examination of board policies, process mapping and meeting with members of other community colleges (see Table 8).

Usefulness of Workshops/Training Opportunities Provided in Development/Updating of CPL policies and processes. Of the training/workshop opportunities provided, 82.3% of the members identified the Mapping Workshop as useful, followed by the best practices workshop at 58.8%, and the advisor training at 53.0% (see Table 9). Approximately half (53%) of the members thought the Advisor Training was useful and 47.1% thought the Portfolio Workshop training was useful (see Table 9). Only one third (29.4%) of the members thought that individual meetings with CAEL or the CAEL report were useful (see Table 9).

Impact and Sustainability of Updated CPL Practices. When asked whether updated CPL practices were impactful, 75% indicated that it had a positive impact on students and on their community college (75.0%). The majority of the respondents (94.2%) indicated the updated CPL practices are sustainable after the grant ends in September, 2016 (see Table 10).

Collaboration between I-AM and Iowa's IHUM project. When members were asked about the continued collaboration between I-AM and IHUM, the majority (70.6%) agreed that continuing collaboration would be beneficial to their community colleges and its students (see Table 10). The majority (76.5%) reported that they believed that the collaboration on CPL practices would continue between the I-AM and IHUM project (see Table 11).

Lessons Learn: What Worked? Committee members responding to the survey shared their thoughts about changes they would implement in the committee. Members indicated that having members on the committee that were in positions of leadership, more buy-in from the college, and having a keener focus at ground level would have made it a better committee (see Table 13). Others reported that the CAEL report was not very helpful and did not really provide room for improvement, perhaps it was more beneficial to learn from other community colleges with more established policies. Sharing ideas, collaborative thought processes was useful. Members suggested need to formalize policies while making them more visible to students would improve the process.

The following section presents results for Credit for Prior Learning Committee Survey.

CREDIT FOR PRIOR LEARNING COMMITTEE

This section centers on the Credit for Prior Learning Committee.

Table 2.
Please describe the goal of the CPL Committee as if you are describing it to someone not familiar with the goal.

Responses Provided	Percentage
Ability for credit to be issued for prior experiences	46.7
Review and update CPL policies and procedures	26.7
Identifying available CPL options	13.3
Establish a CPL process	6.7
To develop a consistent CPL framework	6.7

n=15

Table 3.
The following question asks about the current Prior Learning Assessment (PLA) practices at your community college.

		Does your community college offer each of the following PLA practices?		*In general, how are students made aware of these PLA opportunities? (Select all that apply)*						
PLA Practices	*n*	Yes	No	Student has to ask	Advisor Offers	Faculty Offers	Info on Website	Flyer/ Poster	Other	Not Offered
CLEP	17	100.0	0.0	76.5	58.8	5.9	82.4	17.6	0.0	0.0
DANTES DSST	17	41.2	58.8	23.5	5.9	0.0	29.4	0.0	17.6	41.2
Military Transcript Evaluation	17	94.1	5.9	58.8	41.2	5.9	52.9	0.0	11.8	5.9
Portfolio Review	17	70.6	29.4	52.9	17.6	23.5	41.2	0.0	0.0	29.4
ACE	17	64.7	35.3	35.3	17.6	0.0	17.6	0.0	29.4	29.4
Institutional Challenge Exam	17	58.8	41.2	47.1	23.5	17.6	23.5	0.0	11.8	29.4
Advanced Placement Exam	17	82.4	17.6	58.8	29.4	5.9	52.9	0.0	11.8	11.8
License or Credential for Credit	17	82.4	17.6	47.1	35.3	23.5	41.2	5.9	17.6	11.8
Non-Credit to Credit	17	94.1	5.9	47.1	41.2	23.5	41.2	11.8	35.3	5.9
Credit for Experiential Learning	17	70.6	29.4	52.9	29.4	17.6	29.4	0.0	11.8	23.5
Test-Out Exams	17	94.1	5.9	76.5	29.4	23.5	41.2	0.0	0.0	5.9

Note: Values reflect percentages.

Table 4.
Did your community college's CPL policies and/or practices change as a result of the I-AM project?

Changes Made	Percentage
Yes, extensive changes were made	23.5
Yes, moderate changes were made	35.3
Yes, minor changes were made	29.4
No changes were made	11.8

n=17

Table 5.
Please describe the changes made to CPL policies and/or practices at your community college.

Responses Provided	Percentage
Added/revised portfolios	26.7
Added 3rd party credentials	13.3
Expanded military transcript evaluation	13.3
Finalized/updated process and forms	13.3
Info about CPL policy now in handbook	13.3
Non-credit to credit crosswalk	13.3
Added process for reviewing and awarding credit	6.7
Changes put through committees	6.7
Continue to review processes	6.7
Created formal institution wide CPL policy	6.7
Expanded to include DSST and AP	6.7
Focused on identifying chances to highlight policy	6.7
Hands on testing	6.7
Moved to more flexible assessments	6.7
Policy for Advanced Standing was created	6.7
Review of CTE courses	6.7
Reworked process map	6.7
Student driven	6.7
We are behind	6.7

Note: Some respondents provided multiple responses.
n=15

Table 6.
Please describe why no changes were made to CPL policies and/or practices were made at your community college.

Responses Provided	Percentage
A district-wide committee is in the process of rewriting the manual	50.0
The policies were in place long before the start	50.0

n=2

Table 7.
Has your community college partnered with or used resources from another Iowa community college to rework your Credit for Prior Learning options?

Response	Percentage
Yes	58.8
No	41.2

n=17

Table 8.
Which community colleges has your community college partnered with on Credit for Prior Learning? What resources from other community colleges has your community college used for your Credit for Prior Learning policies? (Please describe)

Responses	Percentage
[Partnered with] all community colleges	40.0
Attended conferences	20.0
Created matrices of CPL practices of all colleges	20.0
Free sharing	20.0
Looked at board policies of community colleges	20.0
Looked at other community colleges' CPL structure	20.0
Met with community colleges	20.0
Process mapping	20.0
Southeastern Community College	20.0

Note: Some respondents provided multiple responses.
n=5

Table 9.

Please rate the usefulness of each of the following workshops/training opportunities in developing or updating CPL policies and processes at your community college.

Opportunities	*n*	Not at all Useful	Not Very Useful	Neutral	Somewhat Useful	Very Useful
Advisor Training	17	5.9	17.6	23.5	47.1	5.9
Portfolio Workshop	17	0.0	17.6	35.3	47.1	0.0
Best Practices Workshop	17	0.0	0.0	41.2	29.4	29.4
Individual Meetings with CAEL	17	11.8	5.9	52.9	29.4	0.0
CAEL Report	17	0.0	17.6	29.4	29.4	23.5
Mapping Workshop	17	0.0	0.0	17.6	58.8	23.5

Note: Values reflect percentages.

Table 10.
Please indicate the extent with which you agree with the following statements.

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Not Applicable
The updated CPL practices have had a positive impact on my community college.	16	0.0	0.0	25.0	37.5	37.5	1
The updated CPL practices have had a positive impact on students.	16	6.3	0.0	18.7	50.0	25.0	1
The collaboration between I-AM and IHUM will be beneficial to both students and my community college.	17	0.0	5.9	23.5	35.3	35.3	0
The updated CPL practices are sustainable after the grant ends on September 30, 2016.	17	0.0	0.0	5.9	47.1	47.1	0
The work accomplished by the CPL Committee has resulted in broader coordination among departments at my community college.	17	5.9	5.9	11.8	47.1	29.4	0

Note: Values reflect percentages.

Table 11.
Please rate the likeliness of expected collaboration on CPL between I-AM and IHUM projects at your community college.

Likeliness	Percentage
Very Unlikely	5.9
Unlikely	0.0
Undecided/Not Sure	17.6
Likely	47.1
Very Likely	29.4

n=17

Table 12.
For CPL, what would you like to see happen with the IHUM project moving forward? (Please describe)

Responses	Percentage
Continued CPL communication with all colleges	15.4
Applied to IHUM as well	7.7
Build on what was accomplished in I-AM	7.7
Committee work should continue	7.7
Complete review of practice	7.7
Consistency among community colleges	7.7
Continued expansion	7.7
Difficult to incorporate CPL into healthcare	7.7
Diversify options for students	7.7
Focus on improving information given to students	7.7
Greater portfolio opportunities	7.7
Stronger faculty training	7.7

Note: Some respondents provided multiple responses.
n=13

Table 13.
Now that the I-AM project is in its final year, what changes, if any, would you make as a member of the CPL Committee? (Please describe)

Responses	Percentage
Don't use CAEL	33.3
Have people in positions of leadership	16.7
Keener focus at ground level	16.7
Less meetings	16.7
More buy-in from college	16.7
More objective overview	16.7

Note: Some respondents provided multiple responses.
n=6

Table 14.
Please share any thoughts or comments about lessons learned with regards to strengthening CPL policies and/or practices. What worked? Are there things you would change? (Please describe)

Responses	Percentage
CAEL report did not show much room for improvement	10.0
CAEL report not accurate	10.0
Collaborative thought process was useful	10.0
Good policy in place	10.0
Learned a variety of instruments is needed	10.0
More beneficial to learn from other's established policies	10.0
More work needs to be done with veterans	10.0
Policies were formalized	10.0
Policy needs to be made more visible	10.0
Recognized policies needed to change	10.0
Sharing ideas	10.0
Very hard to work with CAEL	10.0
Will continue to align CPL with 4 year colleges	10.0

Note: Some respondents provided multiple responses.
n=10

Appendix S:

Advising & Enrollment Committee Survey Report: Fall 2015

METHODOLOGY

Advising and Enrollment, Career Navigator Survey

The Advising and Enrollment, Career Navigator Survey was distributed to the 16 members of the Advising and Enrollment Committee and Career Navigators at the community colleges during the month of October, 2015. All 16 of the members invited to complete the survey did so resulting in a 100% response rate. Respondents represented 13 of the 15 community colleges (see Table 1). All respondents were asked whether they were members of the Advising and Enrollment Committee and whether they were Career Navigators at their respective community colleges. Slightly more than half (56.3%) of the respondents indicated that they served on the Advising and Enrollment Committee (see Table 2) and 62.5% indicated that they were a Career Navigators/Success Coach/Advisor (see Table 3).

Table 1.
Number of Respondents by Community College.

Community College	Number of Respondents
Des Moines Area Community College	1
Eastern Iowa Community College	0
Hawkeye Community College	1
Iowa Central Community College	2
Indian Hills Community College	1
Iowa Lakes Community College	1
Iowa Valley Community College District	1
Iowa Western Community College	1
Kirkwood Community College	0
North Iowa Area Community College	1
Northeast Iowa Community College	1
Northwest Iowa Community College	1
Southeastern Community College	3
Southwestern Community College	1
Western Iowa Tech Community College	1

n=16

Advising and Enrollment Committee Members. Respondents that indicated they were members of the committee were given questions about the development of the Intrusive Advising Model/Approach and whether or not their respective community colleges were implementing the model. Respondents that indicated that the model was being implemented at their community college were asked to identify which sections of the model were being utilized and to describe the ease and effectiveness of the model to date. Respondents that indicated that the model was not being implemented were asked why it wasn't being utilized. Committee members were also asked whether they would make any changes as a member of the committee and whether they had any final thoughts about lessons learned about advising and enrollment.

Career Navigators/Success Coaches. Respondents that indicated that they were a career navigator/success coach were asked about the responsibilities and duties associated with their role and about the number of students they advise, on average, each semester. They were asked to indicate the frequency and usefulness of various student services (e.g., KeyTrain/Career Ready 101, National Career Readiness Certificate [NCRC], Credit for Prior Learning, Third Party Certifications, and Career Pathways), the extent to which they thought their position was sustainable, and the frequency of their students requiring assistance (e.g., with registration, counseling services, housing assistance, etc.). Lastly, Career Navigators were asked about the Intrusive Advising Model/Approach implemented at their community college and to share lessons learned about their role as Career Navigators/Success Coaches.

Implementation Analysis Research Questions

Responses to the Advising and Enrollment, Career Navigator Survey questions partially answer the following TAACCCT grant required research questions:

- How were programs and program design improved or expanded using grant funds?
- Did the grantees conduct an in-depth assessment of participants' abilities, skills, and interests to select participants into the grant program?

In particular, the program design was improved/expanded with the inclusion of the Intrusive Advising Model/Approach (at the community colleges who used it). The inclusion of the Model/Approach and the addition of Career Navigators helped students, who would not have otherwise completed the program, complete an I-AM program. Included in the Intrusive Advising Model/Approach were several requirements participants had to complete in order to start an I-AM program. Those requirements included taking the Compass test, taking the NCRC, and determining if credit for prior learning was applicable. Committee member responses can be used to inform project and college leadership when making future decisions about the project.

RESULTS

Advising and Enrollment Committee. When asked to describe the goal of the Advising and Enrollment Committee, the majority (62.5%) of the respondents indicated that the overall goal of the committee was to develop/establish an Intrusive Advising Model (See Table 4). In addition, approximately one quarter (25%) of the respondents indicated that one of the goals of the committee was also for sharing best practices; 12.5% indicated that one of the goals was to align/streamline non-credit and credit classes, and 12.5% indicated that a goal was to help under-skilled workers gain better skills (See Table 4).

Intrusive Advising Model/Approach. Respondents were asked to describe how the Intrusive Advising Model/Approach was utilized at their community college. The majority of respondents indicated that the Intrusive Advising Model/Approach was being implemented in its entirety (33.3%) or partially (55.6%; see Table 5). At some of the community colleges, the Intrusive Advising Model is being used only on the non-credit side or it's used to link participants to the best possible resources. At least one respondent indicated that his community college was using a similar model developed by his respective community college and therefore not implementing the Intrusive Advising Model (see Tables 6 and 7). Overall, respondents agreed that the Intrusive Advising Model is easy to use (62.5%), is a useful tool (87.5%), has had a positive impact on student recruitment and retention (75.0%), has had a positive impact on student completion (75.0%), has had a positive impact on their community college (75.0%), and is sustainable (62.5%; see Table 8).

Suggested Changes for the Committee. Given that the survey was administered in the final year of the I-AM program, respondents were asked whether they would make any changes as committee members on the Advising and Enrollment Committee (see Table 9). Suggestions offered by six respondents included "better communication"; "build a stronger collaboration in the group to better serve student issues"; "more face to face time"; and "more time in the beginning [of the program] to talk about having community colleges use the Intrusive Advising Model more widely".

Lessons Learned as Committee Members. Respondents were asked to share any thoughts or comments about lessons learned regarding advising and enrollment. In particular, they were asked whether they would make any changes (see Table 10). Respondents provided various responses to this questions. With regards to students, some lessons identified included the need to meet students and create relationships with them early on, and the ability to start prep courses for students. Experience on the committee was good but may have been better if there was more participation from everyone involved. The model is a solid model but may be difficult to sustain given budgetary constraints. Respondents also reported that sharing stories was a valuable experience.

Career Navigator/Success Coach/Advisor. Approximately one third (30%) of Career Navigators advise between 21-40 students per semester, 30% advise between 41-60 and the remainder advise between 81-140 students per semester. Advisors were asked to provide a

description of their responsibilities and duties in their role as a Career Navigator/Success Coach/Advisor (see Table 12). The majority (80%) of advisors indicated that they were responsible for providing academic advising/registration, 60% reported that they help with career placement, half (50%) indicated that they assist students by linking them to needed resources, and about one third (30%) reported helped with tuition assistance. Others reported helping with data entry, helping students develop soft skills, and identification of student barriers.

Advisors were asked to estimate the frequency with which they provide information about various services to students and to rate how useful they perceived these services have been for students (see Table 13).

KeyTrain/Career Ready 101. Half (50%) of the advisors reported that they provided information on KeyTrain/Career Ready 101 services at least some to all of the time. In contrast, 40% reported that they rarely provide information about these services, and 10% never provide information about these services (see Table 13). It should be noted that in the quarterly reports each community college provided to the consortium, a few community colleges already had a different remediation program in place and a few other community colleges offered it, but did not make it a core requirement. Approximately 40% of the advisors thought that KeyTrain/Career Ready 101 were either useful (20%) or very useful (20%), 40% thought it was somewhat useful and 10% thought it was not useful at all.

National Career Readiness Certificate (NCRC) Assessment. The majority (80%) of the advisors indicated that they provided information about the NCRC assessment to students all of the time while 20% of advisors indicated that they provided information on the NCRC some of the time (see Table 13). When asked how useful the NCRC assessment is for students, approximately 70% of advisors indicated that they thought it was either useful or very useful and 30% thought it was somewhat useful.

Credit for Prior Learning (CPL). The majority (60%) of advisors indicated that they rarely provide information to their students regarding CPL, 20% provide it some of the time, and 20% provide information most or all of the time (see Table 13). In general, advisors were mixed about whether they thought CPL information was useful to students. Approximately half of the advisors thought that the information was either not at all or only somewhat useful and the other half thought it was either useful or very useful.

Third Party Certifications. All of the advisors indicated that they provided information to students regarding third party certifications; 70% indicated that they provided information most to all of the time and 30% reported that they provided information some of the time (see Table 13). The majority (90%) of advisors reported that they found third party information to be either useful or very useful for students and 10% found it to be somewhat useful (see Table 13).

Career Pathways. The majority (90%) of advisors indicated that they provide information about career pathways most or all of the time to their students while 10% indicated that they provide

this information some of the time to their students (see Table 13). The majority (90%) of advisors reported that they thought information on career pathways was either useful or very useful to students and 10% reported that it was somewhat useful (see Table 13).

Sustainability of Career Navigator/Success Coach/Advisor. Less than half (42.9%) of the advisors responding to the survey indicated they agreed that their position created specifically for I-AM project will be sustained by their respective community college while the remainder (57.2%) indicted that they did not agree that it would be sustained (see Table 14). A greater percentage of advisors (57.2%) reported that they agreed that the position along with an expanded role into others areas would be sustained while the remaining advisors disagreed that it would be sustained. Overall, the majority (90%) of the advisors agreed that the position of career navigator/success coach/advisor had a positive impact on the community college and its students.

Direct Assistance or Referrals provided by Advisors. Advisors were asked how about the frequency that they help students out with various academic (e.g., registration) and support (e.g., counseling, housing) services (see Table 15). The advisors help students often with case management of support services for individual students (50.0%), registration (80.0%), academic assistance (70.0%), career services (90.0%), financial assistance (80.0%), transportation assistance (50.0%), and other community resources (50.0%). They also help with other community resources include mental health counseling referrals (37.5%), PACE funding (37.5%), Salvation Army/Goodwill (25.0%), and Vocational Rehabilitation (25.0%; see Table 16).

Advising Model/Approach. Advisors were asked to describe whether the model was perceived favorably and whether the model/approach was being implemented in other departments at their respective community colleges. Half of the advisors responding indicated that the Intrusive Advising Model is looked upon favorably in other departments. The usage of the model was mixed, 30% reported that it was used in PACE, 10% reported that a similar model was already in place, 30% reported that it was not being used, and 10% reported that it is beginning to be used in other departments (see Table 17).

Career Navigators/Success Coach/Advisor -Lessons Learned. When asked about lessons learned, advisors indicated advisors should help out in other areas, for example some suggestions included giving navigators a budget to help students, sustaining the role of navigators beyond the grant, providing extra support to students early on, and prodding students that work full-time (see Table 18).

The results of the Advising and Enrollment Committee and Career Navigator/Success Coach/Advisor survey are presented in the following section.

ADVISING AND ENROLLMENT COMMITTEE SURVEY QUESTIONS

This section centers on the Advising and Enrollment Committee. Specifically, questions about the deliverables, participation, and communication are asked.

Table 2.
Are you a member of the Advising and Enrollment Committee?

Response	Percentage
Yes	56.3
No	43.7

n=16

Table 3.
Are you a Career Navigator/Success Coach/Advisor?

Response	Percentage
Yes	62.5
No	37.5

n=16

Table 4.
Please describe the goal of the Advising and Enrollment Committee as if you are describing it to someone not familiar with the goal.

Responses	Percentage
Develop/establish intrusive advising model	62.5
Share best practices	25.0
Align/streamline non-credit and credit	12.5
Help under-skilled workers gain better skills	12.5

Note: Some respondents provided multiple responses.
n=8

Table 5.
Is your community college using the Intrusive Advising Model/Approach developed by the Advising and Enrollment Committee?

Response	Percentage
Yes, the Intrusive Advising Model/Approach is being used in its entirety	33.3
Yes, only portions of the Intrusive Advising Model/Approach are being used	55.6
No	11.1

n=9

Table 6.
Please describe how the Intrusive Advising Model/Approach is being used at your community college.

Responses Provided	Percentage
All components are used	37.5
Used on non-credit side only	25.0
Every degree seeking student is assigned an advisor	12.5
Linking participants to best possible resources	12.5
Utilize navigators to discuss career pathways	12.5

n=8

Table 7.
Why is your community college not using the Intrusive Advising Model/Approach?

Responses Provided
Developed our own intrusive advising model

n=1

Table 8.
Please indicate the extent with which you agree with each of the following statements.

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
The Intrusive Advising Model/Approach is easy to use	8	0.0	12.5	25.0	62.5	0.0
The Intrusive Advising Model/Approach is a useful tool	8	0.0	0.0	12.5	62.5	25.0
The Intrusive Advising Model/Approach has had a positive impact on student recruitment and retention	8	0.0	0.0	25.0	25.0	50.0
The Intrusive Advising Model/Approach has had a positive impact on student completion	8	0.0	0.0	25.0	25.0	50.0
The Intrusive Advising Model/Approach has had a positive impact on my community college	8	0.0	0.0	25.0	50.0	25.0
The Intrusive Advising Model/Approach is sustainable	8	0.0	0.0	37.5	50.0	12.5
The Intrusive Advising Model/Approach is looked favorably upon at my community college	8	0.0	0.0	62.5	25.0	12.5

Note: Values reflect percentages.

Table 9.
Now that the I-AM project is in its final year, what changes, if any, would you make as a member of the Advising and Enrollment Committee?

Responses Provided	Percentage
Better communication	16.7
Build a strong collaboration among group to better serve student issues	16.7
Emphasis on exit/post program activities not sustainable	16.7
More face to face time	16.7
More time in beginning to talk about having college use model more widely	16.7
Registration done during orientation	16.7

n=6

Table 10.
Please share any thoughts or comments about lessons learned with regards to advising and enrollment. What worked? Are there things you would change?

Responses Provided	Percentage
Able to start prep courses for students	12.5
Creating relationships with students early on	12.5
Get out of your office and meet the students	12.5
Good experience with committee	12.5
Hard to convince college to keep model due to budget	12.5
More participation from everyone	12.5
Solid advising model	12.5
Story sharing was valuable	12.5

n=8

CAREER NAVIGATOR/SUCCESS COACH/ADVISOR

This section asked respondents to describe their responsibilities/duties associated with being a Career Navigator/Success Coach/Advisor

Table 11.
On average, how many students do you advise each semester?

Number of advised students	Percentage
1-20	0.0
21-40	30.0
41-60	30.0
61-80	0.0
81-100	10.0
101-120	20.0
121-140	10.0
141-160	0.0
More than 160	0.0

n=10

Table 12.
Please describe your responsibilities/duties as Career Navigator/Success Coach/ Advisor.

Responses Provided	Percentage
Academic advising/registration	80.0
Career placement	60.0
Linking students to resources	50.0
Tuition assistance	30.0
Data entry	20.0
Soft skills help	20.0
Assist with planning	10.0
Funding assistance	10.0
Help students as much as possible	10.0
Identify student barriers	10.0
Meetings	10.0

Note: Some respondents provided multiple responses.
n=10

Table 13.
In the following section you are asked to indicate the frequency of use and usefulness of various student services.

		How often do you provide the following information to students?					*How useful have each of the following services been for students?*			
Resources	*n*	Never	Rarely	Some of the Time	Most of the Time	All of the Time	Not at All Useful	Somewhat Useful	Useful	Very Useful
KeyTrain/ Career Ready 101	10	10.0	40.0	20.0	10.0	20.0	20.0	40.0	20.0	20.0
NCRC	10	0.0	0.0	20.0	0.0	80.0	0.0	30.0	30.0	40.0
Credit for Prior Learning	10	0.0	60.0	20.0	10.0	10.0	10.0	40.0	20.0	30.0
Third Party Certifications	10	0.0	0.0	30.0	30.0	40.0	0.0	10.0	30.0	60.0
Career Pathways	10	0.0	0.0	10.0	30.0	60.0	0.0	10.0	20.0	70.0

Note: Values reflect percentages.

Table 14.
Please indicate the extent with which you agree with the following statements.

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	I Don't Know
My community college will continue to fund (sustain) the Career Navigator/Success Coach/Advisor role/position as is, created specifically for the I-AM project, after the grant ends on Sept. 30, 2016.	7	28.6	28.6	0.0	42.9	0.0	3
My community college will continue to fund (sustain) the Career Navigator/Success Coach/Advisor role/position as is, created specifically for the I-AM project, after the grant ends, but the role will be expanded into other areas (e.g., Nursing).	7	14.3	28.6	0.0	42.9	14.3	3
The Career Navigator/Success Coach/Advisor will continue on at my community college, but the job duties will likely change.	6	16.7	16.7	33.3	33.3	0.0	4
The I-AM specific Career Navigator/Success Coach/Advisor will not continue after the end of the grant, but students will be served by someone in a similar role.	8	12.5	25.0	12.5	25.0	25.0	2
The Career Navigator/Success Coach/Advisor has had a positive impact on my community college.	10	0.0	10.0	0.0	20.0	70.0	0
The Career Navigator/Success Coach/Advisor has had a positive impact on students at my community college.	10	10.0	0.0	0.0	20.0	70.0	0

Note: Values reflect percentages.

Table 15.
How often do you have students that require your assistance (e.g., direct assistance or referral) in each of the following areas?

Assistance	*n*	Never	Rarely	Sometimes	Often	Almost Always
Case management of support services for individual students	10	0.0	10.0	40.0	40.0	10.0
Registration	10	0.0	10.0	10.0	40.0	40.0
Academic Assistance	10	0.0	20.0	10.0	40.0	30.0
Career Services	10	0.0	0.0	10.0	80.0	10.0
Student Health Services	10	10.0	50.0	40.0	0.0	0.0
Counseling Services	10	0.0	30.0	60.0	10.0	0.0
Financial Assistance	10	0.0	10.0	10.0	50.0	30.0
Disability Services	10	10.0	10.0	70.0	10.0	0.0
Student Accounts	10	20.0	20.0	20.0	40.0	0.0
Transportation Assistance (e.g. bus passes, vouchers, parking, carpooling)	10	20.0	0.0	30.0	50.0	0.0
Housing Assistance	10	10.0	40.0	30.0	20.0	0.0
Assistance obtaining public benefits (e.g. food stamps, Medicaid)	10	0.0	40.0	40.0	20.0	0.0
Support services for students in the military and veterans	10	0.0	30.0	50.0	20.0	0.0
Child Care	10	10.0	20.0	60.0	10.0	0.0
Industry Connections (e.g. internships, tours, mock interviews)	10	0.0	10.0	50.0	10.0	30.0
Other Community Resources	10	0.0	0.0	50.0	50.0	0.0

Note: Values reflect percentages.

Table 16.
What other community resources do you provide direct assistance or referrals for students?

Responses Provided	Percentage
Mental Health Counseling Referrals	37.5
PACE funding	37.5
Salvation Army/Goodwill	25.0
Vocational Rehabilitation	25.0
ADDS	12.5
Community Action	12.5
Consumer Credit Counseling	12.5
Domestic Violence	12.5
IowaWorks	12.5
Job Corps	12.5
Legal assistance	12.5
Local clothing and food banks	12.5
"Speed dating" with employers	12.5
WIA	12.5

Note: Some respondents provided multiple responses.
n=8

Table 17.
How is the Intrusive Advising Model/Approach implemented in other departments at your community college? Is the Intrusive Advising Model/Approach looked upon favorably?

Responses Provided	Percentage
Looked upon favorably	50.0
Not utilized in other departments	30.0
Used in PACE	30.0
Already had well rounded advising model	10.0
Cannot be sustained due to budget	10.0
In future, model will become standard for advisors	10.0
Only beginning to use it in other departments	10.0

Note: Some respondents provided multiple responses.
n=10

Table 18.
Please share any thoughts or comments about lessons learned with regards to your role as the Career Navigator/Success Coach/Advisor. What worked? Are there things you would change?

Responses Provided	Percentage
Advisors should help out in other areas	10.0
Everything worked in some sense	10.0
Faculty not liking the advisors – forced oneself in	10.0
Give navigators a budget to help students	10.0
Keep the ratio of students to navigator under 100	10.0
Make advising sessions mandatory	10.0
Model has had a large impact	10.0
NCRC instrumental in predicting success rates	10.0
Role should not go away	10.0
Students were given extra support early	10.0
Those working full time need more prodding	10.0

Note: Some respondents provided multiple responses.
n=10

Appendix T:

Curriculum Committee and Faculty Survey Report: Spring 2016

METHODOLOGY

A Curriculum Committee/Faculty Survey was distributed in February 2016 to 42 Curriculum Committee and faculty members at participating community colleges in order to assess the Iowa Advanced Manufacturing (I-AM) curriculum and classrooms. Twenty-seven individuals completed the survey (response rate =64.3%) representing 14 of the 15 community colleges (see Table 1).

Table 1.
Which community college are you associated with?

Community College	Number of Responses
Des Moines Area Community College	1
Eastern Iowa Community Colleges	1
Hawkeye Community College	6
Iowa Central Community College	2
Indian Hills Community College	1
Iowa Lakes Community College	0
Iowa Valley Community College District	3
Iowa Western Community College	2
Kirkwood Community College	1
North Iowa Area Community College	2
Northeast Iowa Community College	1
Northwest Iowa Community College	1
Southeastern Community College	2
Southwestern Community College	1
Western Iowa Tech Community College	1

n=25

To determine the respondent's role and capacity in the I-AM project, respondents were asked to identify their title/role, whether they were a member of the Curriculum Committee, and whether they participated in the development or modification of their community college's I-AM curriculum (see Tables 2-4).

Table 2.
Which of the following describes your role in your community college's Iowa Advanced Manufacturing (I-AM) program best?

Role	Percentage
Yes, I am a faculty member that teaches welding courses	36.0
Yes, I am a faculty member but I do not teach welding courses	40.0
No, I am not a faculty member in my community college's I-AM program	24.0

n=25

Table 3.
Are you a member of the Curriculum Committee?

Response	Percentage
Yes	40.0
No	60.0

n=25

Table 4.
Were you given opportunities to participate in the development or modification of the curriculum for the Iowa Advanced Manufacturing program at your community college?

Response	Percentage
Yes	76.0
No	24.0

n=25

Contributions to Curriculum Revisions. Respondents were asked to indicate their level of contribution/participation in the development or modification of the I-AM curriculum. Respondents that indicated they were given opportunities to participate in the development or modification of the curriculum were asked to describe their contributions. Respondents were also asked to indicate whether the I-AM program had a positive impact on students and their community college, whether the I-AM program adequately prepares students for jobs in their field, whether they (the respondents) are supportive of I-AM, and if the program is sustainable after the grant ends.

Advanced Manufacturing Faculty. Respondents that indicated they were faculty members were asked about their role, area of focus, and whether they had any third party certifications, and to describe various aspects of their classrooms (e.g., what classes they teach for I-AM project, professional development they may have received, and the equipment in their classroom).

Faculty were also asked if they had been kept informed of the overall implementation of the program, whether their role in the I-AM program was well defined, whether they had been consulted regarding the equipment, and whether their students benefitted from the career navigators/career coaches/advisors/success coaches. Respondents were also asked about I-AM strategies and to rate the extent to which they agreed with those strategies.

Welding Subcommittee. Welding Faculty members were asked specific questions about the Welding Subcommittee and the curriculum developed by the Welding Subcommittee. In particular, they were asked whether their community college had implemented any of the courses resulting from the curriculum developed by the consortium-wide welding committee. They were asked to describe any challenges they may have faced in implementing the courses. The respondents were also asked if they had learned a great deal about AWS SENSE competencies, AWS qualification requirements, AWS certification requirements, the development of an AWS SENSE aligned program, the writing of the course competencies for welding, and the determination of the lecture/lab ratios and credit hours for welding courses. Respondents were also asked to describe the strengths and challenges of the Welding Subcommittee.

Curriculum Committee. Curriculum Committee members were asked to describe the goal of the Curriculum Committee as if they were describing the goal to someone who was not familiar with it. Respondents were asked about the impact of the Curriculum Committee's deliverables on their community college and on their students and whether the deliverables were sustainable after the grant ends.

Curriculum Committee members were asked whether their role in and purpose of the Curriculum Committee was clearly defined, whether the collaboration and communication between committee members was productive, and whether the Curriculum Committee was effective in meeting committee goals and deliverables. Respondents were asked to share whether they would make any changes as a member of the Curriculum Committee and were asked to share any thoughts with regards to building stacked and latticed curriculum and career pathways.

Implementation Analysis Research Questions

Responses to the Curriculum Committee members' and faculty members' survey partially answers two of the following required TAACCCT grant required research questions:

- How was the particular curriculum selected, used, or created?
- How were programs and program design improved or expanded using grant funds?

Responses to the survey provide information about how the curriculum for the I-AM project was developed, updated, and/or revised, respondents level of understanding regarding committee deliverables, perceptions of whether their facilities/instructors were up-to-date and certified and the impact of the program on students.

RESULTS

Contributions to Curriculum Revisions. Over half of the respondents (57.9%) indicated they contributed/participated highly or very highly in the development or modification of the I-AM curriculum at their community college. Half (50.0%) indicated they reviewed the curriculum changes, 44.4% indicated they helped plan or develop the curriculum, and 38.9% indicated they implemented the curriculum changes. The majority (84.0%) of the respondents indicated the Advanced Manufacturing program has had a positive impact on students overall and 80.0% indicated the Advanced Manufacturing program has had a positive impact on their community college. Almost all (92.0%) indicated the I-AM program adequately prepares students for jobs in their field and 96.0% indicated they are supportive of Advanced Manufacturing efforts at their community college.

Advanced Manufacturing Faculty. Faculty from three focus areas responded to this survey – 55.6% indicated their focus area is the Welding Technician/Technology program, 38.9% indicated their focus area is the Machining/CNC/Tool and Die program, and 5.6% indicated their focus area is the Manufacturing Technician/Technology program. Overall, the faculty indicated they have certifications including NIMS (38.9%), AWS (33.3%) and NCRC (16.7%).

When asked about the Advanced Manufacturing classes they teach, 53.3% indicated they developed new classes/modules, but 82.3% indicated they revised/aligned classes/modules. Overall, faculty indicated (87.6%) that their classrooms contain equipment that is representative of what industry uses. Almost all (88.2%) indicated they were consulted regarding the types of equipment needed to implement or enhance the I-AM programs at their community college.

When asked about the I-AM strategies, 94.1% indicated they have incorporated more technology-enabled learning activities into their classroom since the start of the grant, 76.5% indicated their department/program has developed strong relationships or has enhanced existing relationships with employer partners, and 70.5% indicated that most of the students are adequately prepared to learn in their classroom.

Welding Subcommittee. Three-fourths of the respondents indicated they participated in the collaborative (consortium-wide) development of the welding curriculum. Half indicated their community college has implemented at least one welding course developed by the welding subcommittee and 37.5% indicated they would not implement any course developed by the welding subcommittee. Overall, the welding subcommittee members learned a great deal about determining appropriate lecture/lab ratios and credit hours for courses (100.0%), AWS SENSE competencies (83.3%), AWS qualification requirements (83.3%), AWS certification requirements (83.3%), and developing an AWS SENSE aligned program (83.3%). All the welding subcommittee respondents indicated they wanted to meet again.

Curriculum Committee. Respondents were asked to describe the goal of the Curriculum Committee and half (50.0%) indicated the goal was to develop a SENSE aligned curriculum. The respondents were asked to indicate how actively engaged their community college has been

in completing the Curriculum Committee deliverables. Almost all indicated their community college has been actively engaged in the ongoing review of the curriculum (88.9%), the updating of the training facilities (88.8%), the certification of instructors (77.7%), and the development of career pathways (77.7%).

The respondents were also asked to indicate if the Curriculum Committee's deliverables had a positive impact on students. Almost all indicated the updating of the training facilities (88.9%), the ongoing review of the curriculum (87.5%), the certification of instructors (77.7%), and the development of career pathways (77.7%) had a positive impact on students at their community college. The respondents were then asked to indicate if the Curriculum Committee's deliverables are sustainable after the grant ends. All (100.0%) indicated the development of career pathways are sustainable, 88.8% indicated the certification of instructors is sustainable, and 87.5% indicated the audited/aligned curricula are sustainable as well.

Over two-thirds (77.7%) indicated the purpose of the Curriculum Committee was well defined, the collaboration and communication between committee members was productive, and the curriculum committee was effective in meeting committee goals and deliverables. Changes the Curriculum Committee members would like to make include not forcing people to participate (33.3%) and having an independent evaluation of all the signature programs (33.3%). For the last question, respondents were asked to provide any lessons they had learned with regards to building stacked and latticed curriculum and career pathways. One-third (33.3%) indicated they needed to do a better job in involving stakeholders, it was a challenge to get the group together and work, and the stacked/latticed curriculum was difficult to achieve.

The results are presented in the following sections: Contribution to Curriculum Revisions, Advanced Manufacturing Faculty, Welding Subcommittee, and Curriculum Committee.

CONTRIBUTION TO CURRICULUM REVISIONS

The following section describes respondents' contributions to curriculum revisions and their perception of the impact I-AM has had on their respective community colleges.

Table 5.
Please rate your level of contribution/participation in the development or modification of the curriculum for the Iowa Advanced Manufacturing (I-AM) program at your community college.

Level of Contribution/Participation	Percentage
Very Low	0.0
Low	10.5
Moderate	26.3
High	36.8
Very High	21.1
No Participation/Contribution	5.3

n=19

Table 6.
Please describe your contribution/participation in developing or modifying the curriculum for the I-AM program at your community college (e.g., review, auditing, planning of curriculum).

Responses	Percentage
Review curriculum changes	50.0
Planning/developing curriculum	44.4
Implementing curriculum changes	38.9
Instructor	5.6
NIMS	5.6

Note: Some respondents provided multiple responses.
n=18

Table 7.
Please indicate the extent to which you agree with each of the following statements.

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	I Don't Know
Overall, the Advanced Manufacturing program has had a positive impact on students.	25	0.0	0.0	16.0	36.0	48.0	0
Overall, the Advanced Manufacturing program has had a positive impact on my community college.	25	0.0	0.0	20.0	36.0	44.0	0
The I-AM program adequately prepares students for jobs in their field.	25	0.0	0.0	8.0	48.0	44.0	0
I am supportive of Advanced Manufacturing efforts at my community college.	25	0.0	0.0	4.0	40.0	56.0	0
The program at my community college is sustainable after the grant for I-AM ends on September 30, 2016.	23	0.0	17.4	8.7	34.8	39.1	2

Note: Values reflect percentages.

ADVANCED MANUFACTURING FACULTY

The following section describes Advanced Manufacturing faculty, their area of focus, whether they have any third party certifications, as well as descriptions of their classrooms.

Table 8.
What is your area of focus?

Area of Focus	Percentage
Industrial Automation	0.0
Industrial Maintenance	0.0
Machining/CNC/Tool and Die	38.9
Manufacturing Technician/Technology	5.6
Robotics	0.0
Transportation and Logistics	0.0
Welding Technician/Technology	55.6
Other (please specify)	0.0

n=18

Table 9.
Please indicate whether you have any of the following certifications. (Select all that apply)

Certifications	Percentage
AWS	33.3
NIMS	38.9
MSSC CPT	11.1
MSSC CLT	5.6
APICS CPIM	0.0
APICS CSCP	0.0
SME	0.0
NCRC	16.7
Other (please specify)	22.2
I do not have any certifications	5.6

n=18

Responses from the "Other" choice:

Journeyman Card Tool and Die (1)
Lean 101 (1)
Professional Teacher Certification (1)

Table 10.
The following statements ask you to think about the Iowa Advanced Manufacturing classes you teach at your community college.

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Not Applicable
I developed new classes/modules for the I-AM program at my community college.	15	0.0	13.3	33.3	33.3	20.0	2
I revised and/or aligned my classes/modules for the I-AM program at my community college.	17	0.0	0.0	17.6	52.9	29.4	0
I needed professional development/ training to be able to teach courses developed or revised for the I-AM program.	17	17.6	35.3	17.6	29.4	0.0	0
I needed professional development/ training to use equipment purchased for the program.	17	17.6	29.4	11.8	35.3	5.9	0
I have all the equipment and resources I need to teach my classes.	17	0.0	23.5	29.4	41.2	5.9	0
The equipment in my classroom/lab is representative of what is used in industry.	16	0.0	6.3	6.3	68.8	18.8	1

Note: Values reflect percentages.

Table 11.
Please indicate the extent to which you agree with each of the following statements.

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
I have been kept informed regarding the overall implementation of the I-AM program (e.g., curriculum development, new equipment, new hires) at my community college.	17	11.8	5.9	23.5	52.9	5.9
My role in the I-AM program was well defined.	17	5.9	17.6	17.6	41.2	17.6
I was consulted regarding types of equipment needed to implement or enhance the I-AM program.	17	5.9	0.0	5.9	58.8	29.4
Students in my classrooms benefitted from their interactions with Navigators/ Career Coaches/Advisors/ Success Coaches.	17	0.0	5.9	17.6	52.9	23.5

Note: Values reflect percentages.

Table 12.
Please indicate the extent to which you agree with each of the following strategies identified for the Iowa Advanced Manufacturing (I-AM) program at your community college.

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Not Appli-cable	I Don't Know
Aligning curricula with relevant industry recognized certifications strengthened our program.	16	0.0	12.5	43.8	18.8	25.0	1	0
Our ability to offer 3rd party certifications is beneficial to students at my community college.	17	0.0	5.9	35.3	29.4	29.4	0	0
Most of the students are adequately prepared to learn in my classroom (i.e., very few need remediation).	17	0.0	23.5	5.9	52.9	17.6	0	0
I had to make adjustments to my teaching to incorporate contextual learning.	14	0.0	7.1	35.7	35.7	21.4	1	2
Intense advising at my community college has helped best match students to a program of study and educate them regarding career pathways.	16	6.3	12.5	31.3	37.5	12.5	0	1
I have incorporated more technology-enabled learning activities in my classroom since the start of the I-AM project on October 1, 2012.	17	0.0	0.0	5.9	52.9	41.2	0	0
My department/program has developed strong relationships or has enhanced existing relationships with employer partners, business associations, and/or workforce development since the start of the I-AM project on October 1, 2012.	17	0.0	5.9	17.6	47.1	29.4	0	0

Note: Values reflect percentages.

WELDING SUBCOMMITTEE

The following section describes Welding Subcommittee members' participation in development of the welding curriculum, whether courses have been implemented at their respective community college as a result of the develop curricula, challenges in implementing the curricula and their perceptions about working on the committee.

Table 13.
Did you participate in the collaborative (consortium-wide) development of the welding curriculum?

Response	Percentage
Yes	75.0
No	25.0

n=8

Table 14.
Has your community college implemented any courses as a result of the curriculum developed by the consortium-wide welding committee?

Response	Percentage
Yes, we have implemented at least one course.	50.0
No, but we plan to implement at least one course within the next year.	12.5
No, we do not plan to implement any of the courses.	37.5

n=8

Table 15.
Please describe any challenges your community college has had in implementing courses based on the curriculum developed by the consortium-wide welding committee.

Responses	Percentage
Prerequisites and co-requisites are challenging	50.0
Scheduling of new and old curriculum courses	50.0

n=2

Table 16.
Please indicate the extent to which you agree with each of the following statements. I learned a great deal about…

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
AWS SENSE competencies	6	0.0	0.0	16.7	83.3	0.0
AWS Qualification requirements	6	0.0	0.0	16.7	66.7	16.7
AWS Certification requirements	6	0.0	0.0	16.7	50.0	33.3
Developing an AWS SENSE aligned program	6	0.0	0.0	16.7	83.3	0.0
Writing course competencies for welding	6	0.0	0.0	33.3	50.0	16.7
Determining appropriate lecture/lab ratios and credit hours for welding courses	6	0.0	0.0	0.0	100.0	0.0

Note: Values reflect percentages.

Table 17.
Please describe the strengths/challenges of the welding committee. Was the committee successful? Would you like for the welding committee to meet again sometime in the future (e.g., discuss challenges/barriers of implementing the curriculum developed by the committee)?

Responses	Percentage
Want to meet again	100.0
It was successful/beneficial	50.0
Good time to tweak curriculum	25.0

Note: Some respondents provided multiple responses.
n=4

CURRICULUM COMMITTEE

The following section describes Curriculum Committee members' thoughts about the impact of committee deliverables on their community college and on their students.

Table 18.
Please describe the goal of the Curriculum Committee as if you are describing it to someone not familiar with the goal.

Responses	Percentage
Develop SENSE aligned curriculum	50.0
Consistency across community colleges	33.3
Develop curriculum to prepare participants	16.7

n=6

Table 19.
The following questions ask you to think about the Curriculum Committee's deliverables and their impact on your community college. Please indicate the extent to which you agree that your community college has been actively engaged in completing each of the following program deliverables.

Deliverables	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	I Don't Know
Audited/Aligned Curricula with Third Party Credentials	8	0.0	12.5	12.5	25.0	50.0	1
Certification of Instructors	9	0.0	11.1	11.1	33.3	44.4	0
Update of Training Facilities	9	11.1	0.0	0.0	44.4	44.4	0
Enhancement/ Development of Online and Blended Delivery Options	8	12.5	25.0	25.0	0.0	37.5	1
Shared Core Curriculum	9	0.0	11.1	22.2	22.2	44.4	0
Development of Career Pathways	9	0.0	0.0	22.2	44.4	33.3	0
Ongoing Review of the Curriculum	9	0.0	0.0	11.1	11.1	77.8	0

Note: Values reflect percentages.

Table 20.
Please indicate the extent to which you agree that each of the following has had a positive impact on STUDENTS.

Deliverables	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	I Don't Know
Audited/Aligned Curricula with Third Party Credentials	8	0.0	0.0	25.0	25.0	50.0	1
Certification of Instructors	9	0.0	0.0	22.2	33.3	44.4	0
Update of Training Facilities	9	11.1	0.0	0.0	33.3	55.6	0
Enhancement/ Development of Online and Blended Delivery Options	8	12.5	0.0	37.5	12.5	37.5	1
Shared Core Curriculum	9	0.0	11.1	33.3	22.2	33.3	0
Development of Career Pathways	9	11.1	0.0	11.1	33.3	44.4	0
Ongoing Review of the Curriculum	8	0.0	12.5	0.0	12.5	75.0	1

Note: Values reflect percentages.

Table 21.
Please indicate the extent to which you agree that each of the following is SUSTAINABLE at your community college after the grant ends on September 30, 2016.

Deliverables	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	I Don't Know
Audited/Aligned Curricula with Third Party Credentials	8	12.5	0.0	0.0	50.0	37.5	1
Certification of Instructors	9	0.0	0.0	11.1	44.4	44.4	0
Update of Training Facilities	9	11.1	0.0	22.2	44.4	22.2	0
Enhancement/ Development of Online and Blended Delivery Options	7	0.0	0.0	42.9	28.6	28.6	2
Shared Core Curriculum	8	0.0	0.0	25.0	37.5	37.5	1
Development of Career Pathways	9	0.0	0.0	0.0	55.6	44.4	0

Note: Values reflect percentages.

Table 22.
Please indicate the extent to which you agree with each of the following statements.

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
My role in the curriculum committee was clearly defined.	9	11.1	0.0	44.4	11.1	33.3
The purpose of the curriculum committee was well defined.	9	11.1	0.0	11.1	44.4	33.3
Collaboration and communication between committee members was productive.	9	22.2	0.0	0.0	55.6	22.2
The curriculum committee was effective in meeting committee goals and deliverables.	9	11.1	0.0	11.1	44.4	33.3

Note: Values reflect percentages.

Table 23.
Now that the I-AM project is in its final year, what changes, if any, would you make as a member of the curriculum committee? (Please describe)

Responses	Percentage
Course sequence	33.3
Do not force people to participate	33.3
Independent evaluations of all programs	33.3

n=3

Table 24.
Please share any thoughts or comments about lessons learned with regards to building stacked and latticed curriculum and career pathways. What worked? Are there things you would change? (Please describe)

Responses	Percentage
Better job in involving stakeholders	33.3
Challenge to get the group together and work	33.3
Stacked/latticed curriculum difficult to achieve	33.3

n=3

Appendix U:

College Leadership Survey Report: Spring 2016

METHODOLOGY

A survey was developed and distributed in February, 2016 to 39 Iowa community college leaders (i.e., Presidents, Deans, Provosts) that had direct knowledge of the I-AM program at their respective community colleges. A total of 26 participants representing 14 of the 15 community colleges responded to survey questions (see Table 1). One community college was not represented due to changes in leadership prior to the distribution of the survey (see Table 1). College leadership representatives were asked to indicate their level of familiarity with the I-AM project (see Table 2). The majority 92.3% reported that they were either extremely or moderately familiar with the I-AM program at their community college. The remaining representatives reported that they were somewhat familiar with the program at their community colleges (see Table 2)

Table 1.
Which of the following community colleges do you represent?

Community College	Number of Respondents
Des Moines Area Community College	2
Eastern Iowa Community Colleges	0
Hawkeye Community College	2
Iowa Central Community College	2
Indian Hills Community College	2
Iowa Lakes Community College	2
Iowa Valley Community College District	2
Iowa Western Community College	1
Kirkwood Community College	1
North Iowa Area Community College	2
Northeast Iowa Community College	2
Northwest Iowa Community College	2
Southeastern Community College	2
Southwestern Community College	2
Western Iowa Tech Community College	2

n=26

Table 2.
Please indicate your level of familiarity with your community college's Iowa Advanced Manufacturing (I-AM) project overall.

Familiarity	Percentage
Extremely familiar	50.0
Moderately familiar	42.3
Somewhat familiar	7.7
Slightly familiar	0.0
Not at all familiar	0.0

n=26

College leadership representatives were asked whether the I-AM grant afforded their respective community colleges to purchase/update/improve their facilities and/or equipment, hire and/or train instructors, increase recruitment and retention of students, increase marketing of the program, and whether they were able to develop or strengthen partnerships with industry and local businesses. College leadership representatives were asked whether the I-AM program affected their ability to attract students in general, and students identified as displaced, TAA eligible, and/or unemployed or underemployed. They were also asked whether the I-AM program allowed them to expand their marketing efforts, implement the revised curriculum, and provide enhanced support services to students.

College leadership representatives were asked to indicate the effectiveness of various statewide administrative team efforts aspects of the grant including the overall management of the grant and communication between their respective community colleges and the statewide administrative team.

In addition, college leadership representatives were asked about sustainability of the I-AM project at their community college, whether any of the signatures program components would continue after September 30, 2016, and plans to ensure that the signature programs remain up-to-date and in compliance with industry standards.

Lastly, community leadership representatives were asked about the strengths and challenges related to the implementation of the I-AM grant. Specifically, the College Leadership were asked to describe what the implementation of the project has meant to their community college and to share any thoughts about lessons learned.

Implementation Analysis Research Question

Responses to the College Leaderships Survey partially answer the following TAACCCT grant required research question:

- How were programs and program design improved or expanded using grant funds?

In particular, the responses regarding the improvements to facilities, updating of facilities/equipment, training of faculty, and the willingness of various groups of people to implement the program directly answered how the program and program design was improved or expanded using grant funds. Responses from college leadership provide useful information that can guide future decisions about this or similar projects in the future.

RESULTS

Opportunities Afforded by the I-AM Project. Community college leadership representatives were asked to indicate the extent to which they agreed that the I-AM grant afforded their community colleges various opportunities (see Table 3). The majority (73.1%) of the leadership agreed that the grant provided opportunities to update/improve facilities and 100% agreed that the grant provided opportunities to purchase or update facilities. The majority (96.1%) agreed that the grant has afforded their community college the opportunity to train existing instructors, 88.5% agreed that it strengthened existing partnerships with industry and local businesses, and 84.6% agreed that it increased advanced manufacturing program-specific marketing. The majority (77%) agreed that it afforded the community college an opportunity to increase the number of students and 73% agreed that it afforded the opportunity to increase the retention of students (see Table 3).

Impact of the I-AM Project. Community college leadership representatives were asked to indicate the extent to which they agreed that the I-AM project had an impact on students, marketing efforts, implementing the curriculum and building relationships with industry/employer partners (see Table 4). The majority (73.1%) of the respondents agreed that their community college had increased their success in attracting students to the program while 19.1% were neutral as to whether it had increased their success, and 7.7% disagreed that it had an impact on attracting students. Attracting displaced, TAA eligible, and/or unemployed/ underemployed workers was somewhat more challenging although 61.6% agreed that that they had success in attracting these students. In contrast, 30.8% were neutral as to whether it impacted their success in attracting displaced, TAA eligible, or unemployed/underemployed students and 7.7% disagreed that it made an impact (see Table 4).

Overall, the majority (92.3%) of respondents agreed that marketing efforts to the community had been expanded, 92.5% agreed that students have received enhanced supported services, and 88.4% agreed that relationships their community held with industry/employer partners had strengthened as a result of the project.

Respondents were asked whether the willingness of faculty and department chairs/deans to fully implement the revised I-AM curriculum (see Table 4). The majority (77%) reported that both faculty and department chairs/deans were willing to fully implement the revised curriculum, 19.2% were neutral about faculty/department chair willingness to fully implement and 3.8% reported that faculty/department chair were not willing to fully implement the revised curriculum (see Table 4).

Effectiveness of the Statewide Administrative Team/Management of the I-AM Project. Community college leadership representatives were asked to rate the effectiveness of the statewide administrative team in its overall management of the I-AM project (see Table 5). Overall, 100% of the respondents reported that the I-AM project has been effective and all of the respondents reported that the statewide administrative team was effective in their management of the project (see Table 5). The majority (96%) of the respondents reported that communication with the statewide administrative team was also effective, 4% reported that communication was somewhat effective (see Table 5).

Sustainability of I-AM Program. Community college leadership representative were asked about the sustainability of various positions (e.g., faculty, advisors, project staff) that were hired specifically for the I-AM project at their respective community colleges (see Table 6). It should be noted that not all of the participating community colleges hired additional faculty, advisors or project staff for the project, therefore, the following percentages may reflect only those community colleges where these positions are applicable. Where applicable, the majority (79%) of the respondents indicated that faculty positions will be sustained and 21% indicated that faculty position will be sustained but the faculty position may change somewhat (see Table 6). Half (50%) of respondents indicated that advisors (e.g., career navigators, career/success coaches) will be sustained following the end of the grant, 44.4% indicated that advisors will be sustained in a similar role, and 5.6% indicated that advisors would not be sustained. Only a few (18.8%) of the respondents indicated that project staff will be sustained when the grants ends, slightly more than half (56.2%) indicated that project staff will continue to be sustain but that their role may change, 25% indicated that the position will not be sustained (see Table 6).

Community college leadership were asked about sustainability about courses developed for I-AM, awards, and American Welding Society (AWS) accredited testing facilities (see Table 7). Where applicable, the majority (84%) indicated that courses developed for I-AM, 91.7% indicated that awards (e.g., certificates, diplomas, degrees) offered in Advanced Manufacturing and 77.8% indicated that AWS accredited testing facilities would be sustained following the end of the grant on September 30, 2016 (see Table 7).

College leadership representatives were asked what plans their respective community colleges have for sustaining the I-AM program (see Table 8). Approximately 27.3% of the respondents indicated that the project will be sustained through its operating budget, 13.6% indicated that enrollment will be used to determine sustainability, and 9.1% indicated they will continue their partnerships with industry, continue to focus on development and implementation, and continue to find money to sustain the program (see Table 8).

Community college leadership were also asked how their respective community colleges would ensure that the signature program(s) developed for the project remain in compliance with industry standards and not become obsolete. About one third (33.3%) of the respondents indicated that they would continue to work with industry partners, 23.8% indicated that their advisory committees will continue to meet, 14.3% would ensure that faculty receive adequate development, and 9.5% indicated that they will ask faculty for recommendations, remain

engaged with industry standards, make upgrades as needed, and continue recruiting students for these programs (see Table 9).

Community college leadership were asked to describe what the implementation of the I-AM project has meant to their community college (see Table 10). Slightly over half (54.2%) of the respondents indicated that the grant allowed them to update or purchase equipment, 37.5% reported that it allowed them to revise and/or expand their curriculum, and 33.3% indicated that it allowed them to hire/train faculty. Other reported that it improved relationships with industry (20.8%), improved marketing of programs (16.7%), increased capacity (8.3%), provide more student assistance (4.2%), and provide more short term certificate programs (4.2%; see Table 10).

When asked to share their thoughts on lessons learned related to what worked, things that should change, college leadership reported that the project worked well, however, it took time to assemble an effective team, that a grant coordinator was needed, and that alignment of the curriculum was important. Some respondents indicated that it was difficult to bring new instructors up to speed and that perhaps a gap analysis should have been conducted at the beginning of the project.

The following section includes results about the Statewide Management of the Iowa Advanced Manufacturing (I-AM) Project, Sustainability of the I-AM Project, and Strengths and Challenges.

Table 3.
Please indicate the extent to which you agree with each of the following statements. The I-AM grant funding has afforded us the opportunity to…

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Update/improve facilities	26	3.8	7.7	15.4	26.9	46.2
Purchase or update equipment	26	0.0	0.0	0.0	26.9	73.1
Hire qualified instructors	26	3.8	3.8	34.6	30.8	26.9
Train existing instructors	26	0.0	0.0	3.8	42.3	53.8
Increase recruitment of students	26	0.0	3.8	19.2	46.2	30.8
Increase retention of students	26	0.0	3.8	23.1	50.0	23.1
Increase advanced manufacturing program-specific marketing	26	0.0	0.0	15.4	42.3	42.3
Develop new partnerships with industry and local businesses	26	0.0	0.0	19.2	57.7	23.1
Strengthen existing partnerships with industry and local businesses	26	0.0	3.8	7.7	57.7	30.8

Note: Values reflect percentages.

Table 4.
The following statements ask about the impact the I-AM project has had on your community college. Please indicate the extent to which you agree with each of the following statements. As a result of the I-AM project…

Statements	*n*	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
We have had increased success in attracting students overall	26	0.0	7.7	19.2	65.4	7.7
We have had success in attracting displaced, TAA eligible, and/or unemployed, underemployed workers	26	0.0	7.7	30.8	38.5	23.1
We have expanded efforts to market to the community	26	0.0	0.0	7.7	53.8	38.5
Our faculty are willing to fully implement the revised curriculum	26	0.0	3.8	19.2	38.5	38.5
Our department chair/dean is willing to fully implement the revised curriculum	26	0.0	3.8	19.2	26.9	50.0
Relationships with industry/employer partners have strengthened as a result of the project	26	0.0	3.8	7.7	61.5	26.9
Students have received enhanced support services	26	0.0	3.8	3.8	53.8	38.5

Note: Values reflect percentages.

STATEWIDE MANAGEMENT OF THE IOWA ADVANCED MANUFACTURING (I-AM) PROJECT

This section centers on the effectiveness of the statewide management of the I-AM project.

Table 5.
Please rate the effectiveness of…

Statements	*n*	Very Ineffective	Ineffective	Somewhat Ineffective	Somewhat Effective	Effective	Very Effective
The statewide administrative team in managing the Iowa Advanced Manufacturing (I-AM) project	26	0.0	0.0	0.0	0.0	38.5	61.5
The Iowa Advanced Manufacturing (I-AM) project overall	26	0.0	0.0	0.0	0.0	53.8	46.2
The communication between you and the statewide administrative team	25	0.0	0.0	0.0	4.0	56.0	40.0
The communication between you and your community college's Advanced Manufacturing team	26	0.0	0.0	0.0	7.7	42.3	50.0

Note: Values reflect percentages.

SUSTAINABILITY OF THE I-AM PROJECT

This section centers on the potential for sustainability after the grant ends on September 30, 2016.

Table 6.
Will your community college sustain any of the following grant-funded positions after the grant ends on September 30, 2016?

Statements	*n*	Yes	No	Yes, but the position/ role may change somewhat	I Don't Know	Not Applicable
Faculty	14	78.6	0.0	21.4	2	9
Advisors (e.g., Career Navigators, Career Coaches, Success Coaches)	18	50.0	5.6	44.4	5	3
Project Staff (e.g., Project Coordinator or Project Lead)	16	18.8	25.0	56.2	6	4

Note: Values reflect percentages.

Table 7.
Will your community college continue to offer any of the following I-AM signature program components after the grant ends on September 30, 2016?

Statements	*n*	Yes	No	I Don't Know	Not Applicable
Courses developed for I-AM	21	100.0	0.0	4	1
Awards (e.g., certificates, diplomas, degrees) in Advanced Manufacturing	22	100.0	0.0	2	2
AWS Accredited Testing Facilities	14	100.0	0.0	4	8

Note: Values reflect percentages.

Table 8.
What are your community college's plans for the sustainability of this program after the project ends on September 30, 2016?

Responses	Percentage
Sustained through operating budget	27.3
Enrollment will determine sustainability	13.6
Continue partnerships with industry	9.1
Continue to focus on development and implementation	9.1
Continue to try to find the money	9.1
Continue to promote Advanced Manufacturing	4.5
Continue to work through IHUM	4.5
Focused on sustainability	4.5
Incorporate into other programs	4.5
Remain an ATF	4.5
Support positions will not be sustained	4.5
Work towards AWS concept based outcomes	4.5

n=22

Table 9.
What will your community college do to ensure that the signature program(s) developed for the grant do not become obsolete and remain in compliance with industry standards?

Responses	Percentage
Continue to work with industry partners	33.3
Advisory Committees will continue to work	23.8
Make sure faculty receive adequate development	14.3
Assessed through program review cycle	9.5
Faculty recommendations	9.5
Keep engaged with industry standards	9.5
Upgrades as needed	9.5
Accredited Testing Facilities for Welding	4.8
Dedicate resources	4.8
Offer Credit for Prior Learning	4.8
Recruiting students	4.8

Note: Some respondents provided multiple responses.
n=21

STRENGTHS AND CHALLENGES

This section centers on the implementation strengths and challenges and on the lessons learned throughout the grant.

Table 10.
Please describe what the implementation of the Iowa Advanced Manufacturing (I-AM) project has meant to your community college.

Responses	Percentage
Update/purchase equipment	54.2
Revisions/expansions to curriculum	37.5
Hire/train faculty	33.3
Ability to start a new program	25.0
Improved relationships with industry	20.8
Better marketing of programs	16.7
Teach to industry standards	12.5
Helped increase capacity	8.3
Revision of CPL opportunities	8.3
Third party certifications	8.3
More student assistance	4.2
Navigators help students become successful	4.2
Renovations	4.2
Short term certificate programs have grown	4.2

Note: Some respondents provided multiple responses.
n=24

Table 11.
Please share any thoughts or comments about lessons learned related to…

- ***What worked?***
- ***Are there things you would change?***
- ***What changes would you make in implementing a similar program in the future?***
- ***Are there any improvements or enhancements you would like to make to the signature program after the project ends?***

Responses	Percentage
It went well/worked	30.8
Have not experience the preferred enrollment growth	15.4
Took a while to assemble effective team	15.4
A grant coordinator is needed	7.7
Alignment of common curriculum was important	7.7
Curriculum revisions	7.7
Developed short bridge program for students	7.7
Difficulty bringing new instructors up to speed	7.7
Gap analysis should have been done at the start	7.7
Grassroots marketing worked best	7.7

Note: Some respondents provided multiple responses.
n=13

Appendix V:

I-AM Participant Maps by Community College: Spring 2016

Number of I-AM Participants by Community College

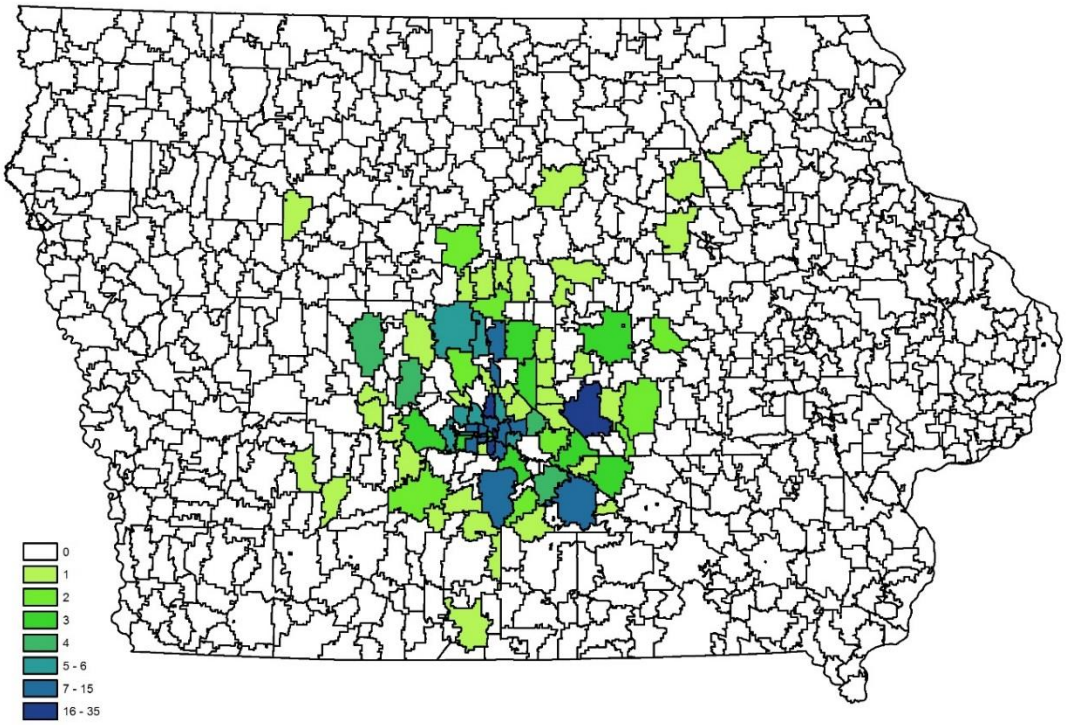

Figure 1. Des Moines Area Community College (DMACC).

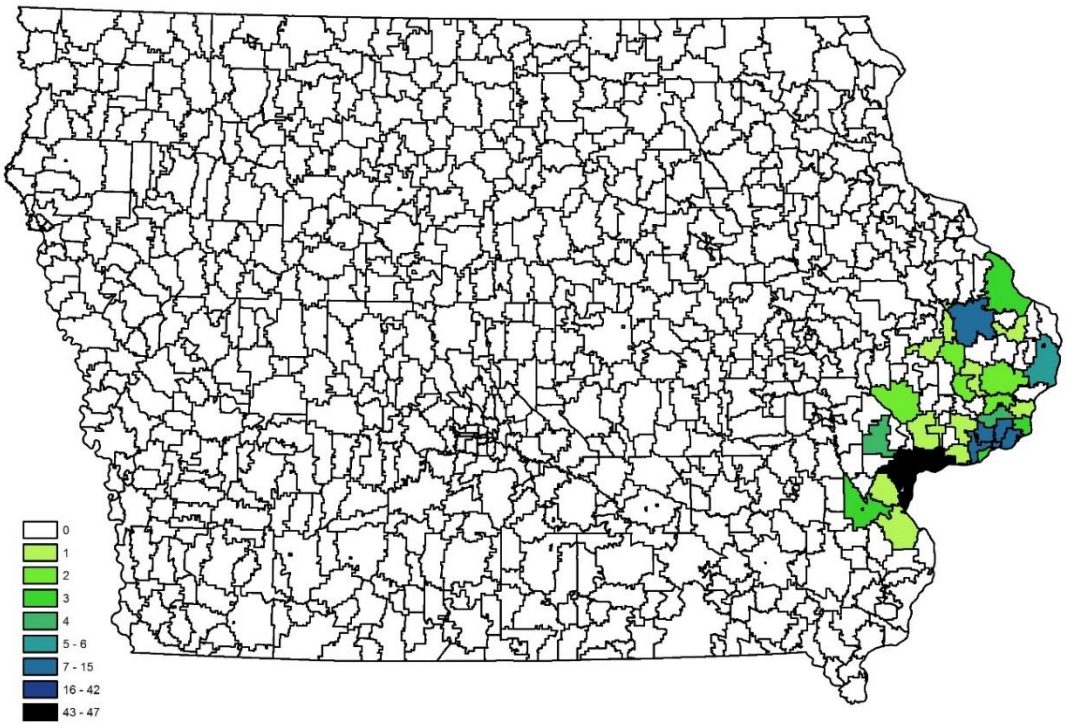

Figure 2. Eastern Iowa Community Colleges (EICC).

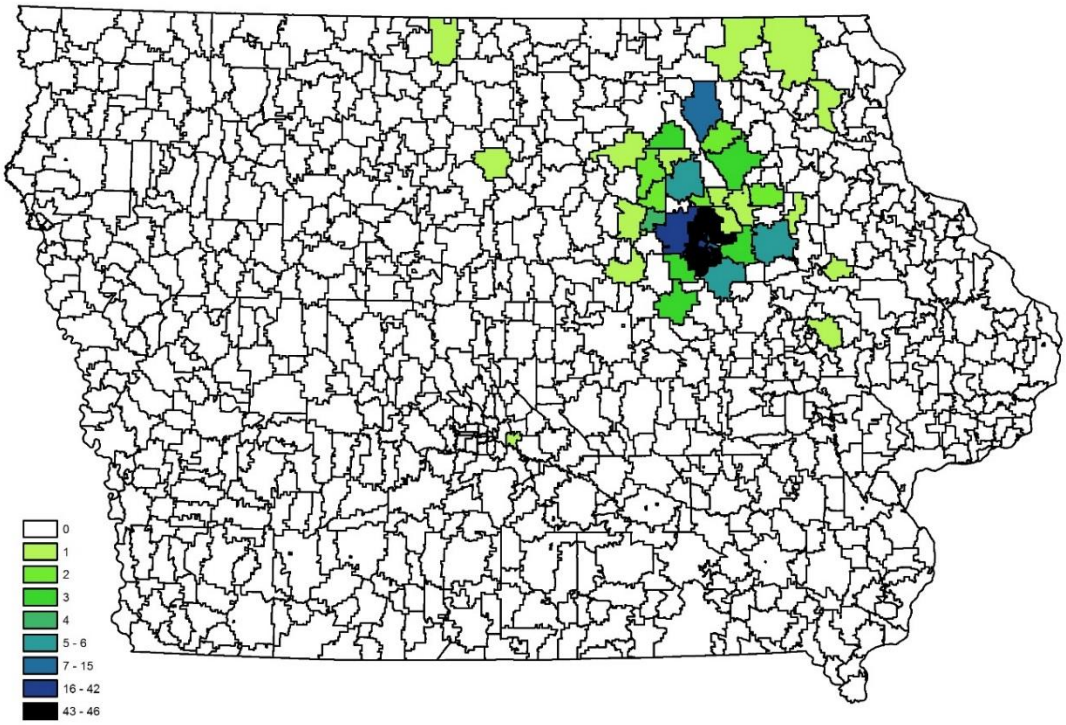

Figure 3. Hawkeye Community College (HCC).

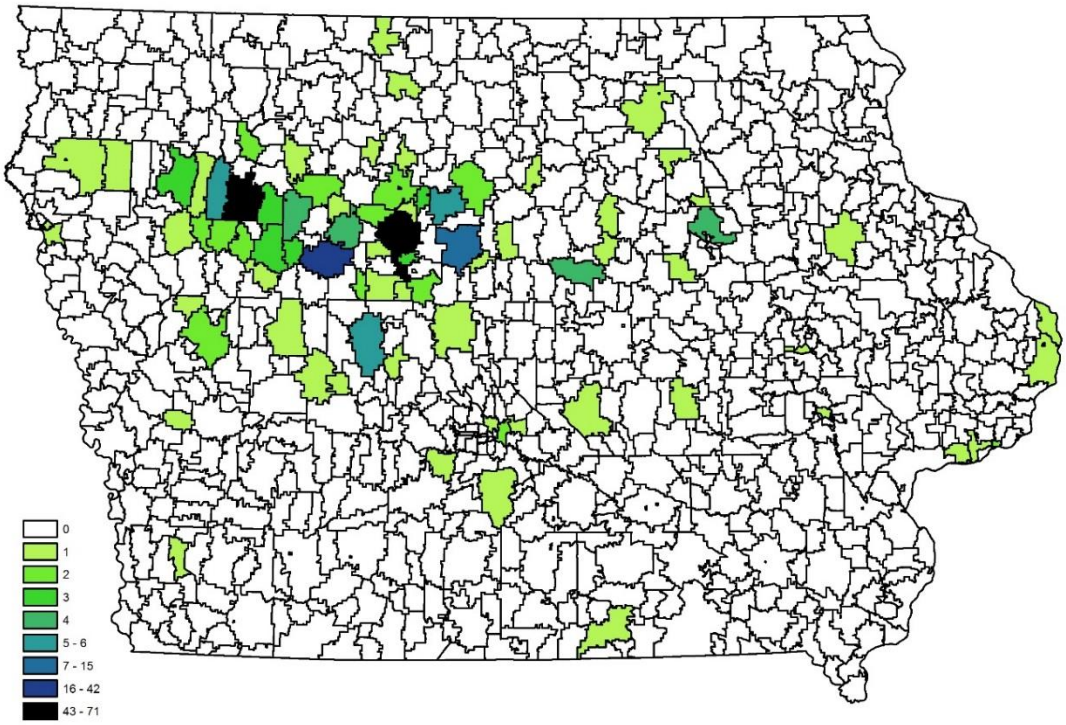

Figure 4. Iowa Central Community College (ICCC).

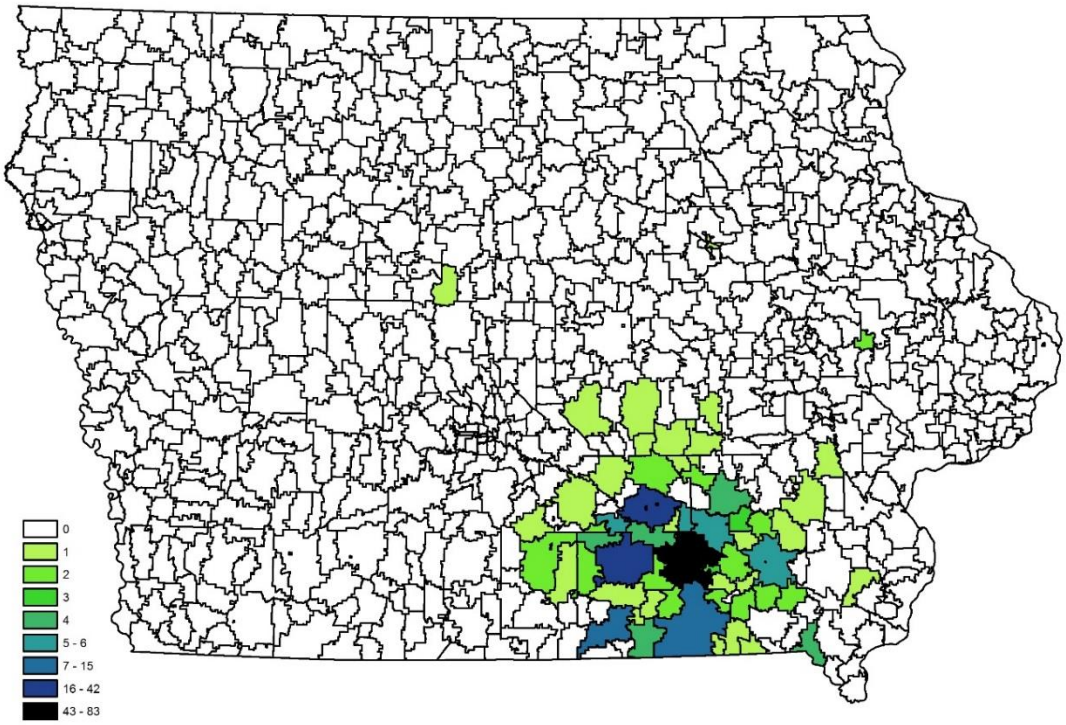

Figure 5. Indian Hills Community College (IHCC).

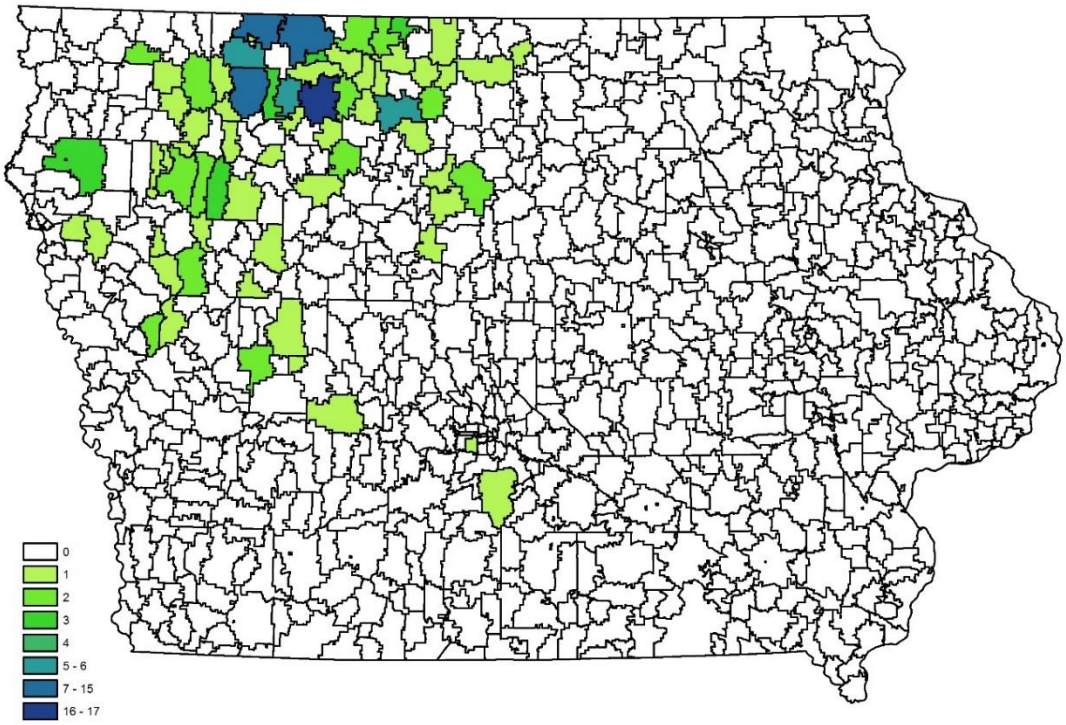

Figure 6. Iowa Lakes Community College (ILCC).

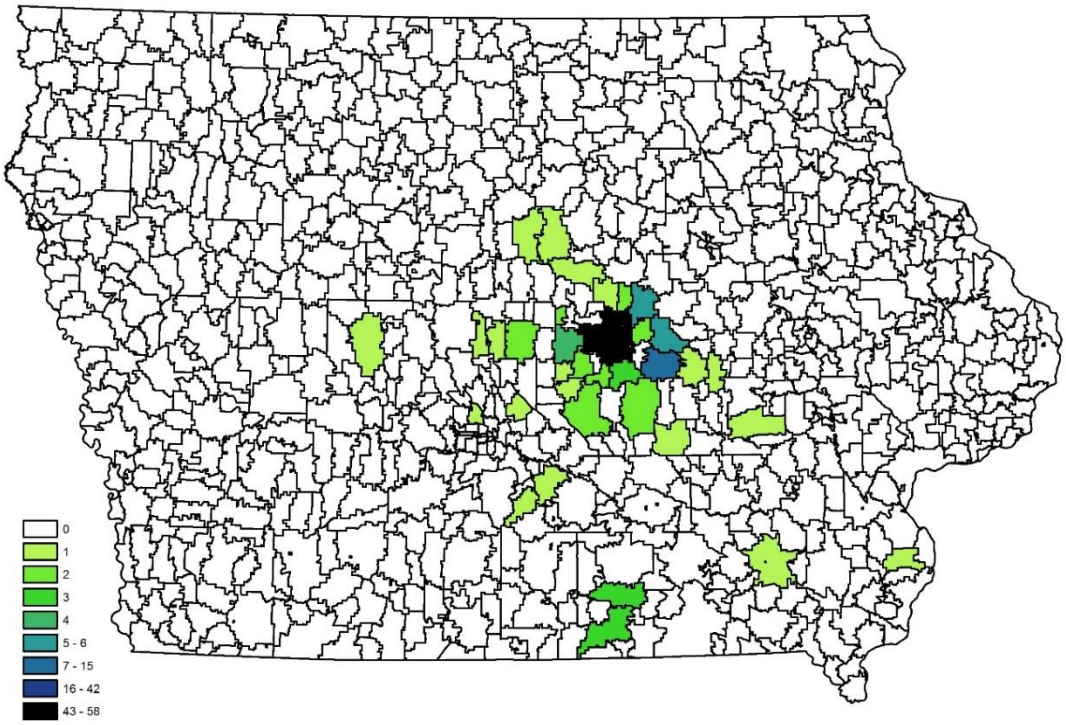

Figure 7. Iowa Valley Community College District (IVCCD).

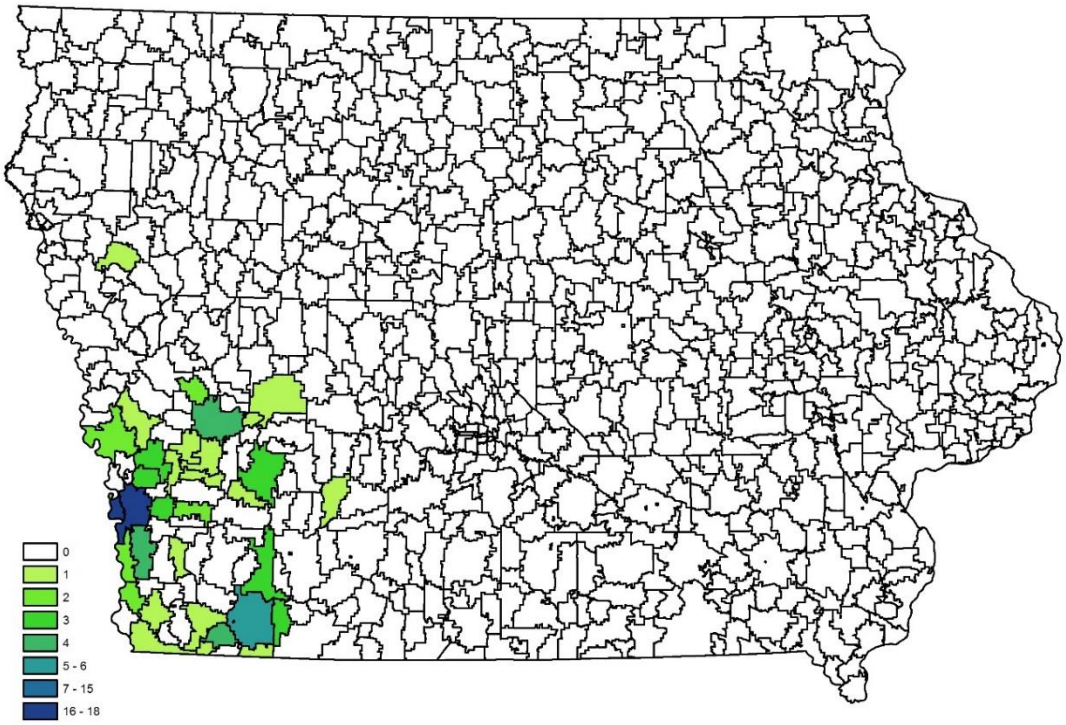

Figure 8. Iowa Western Community College (IWCC).

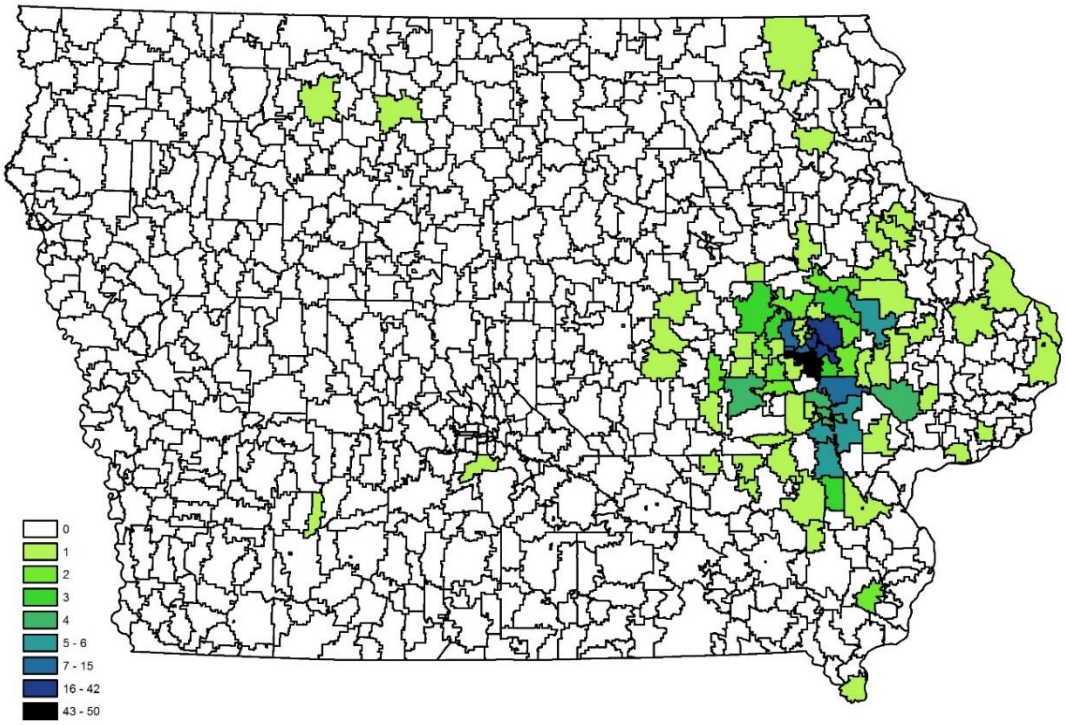

Figure 9. Kirkwood Community College (KCC).

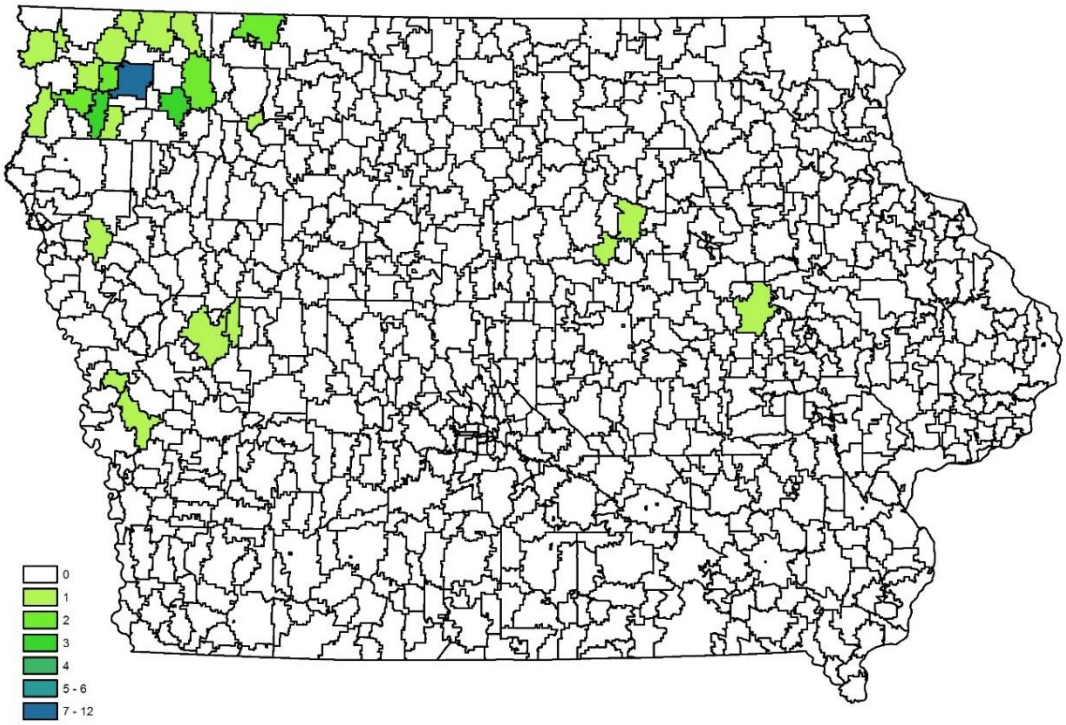

Figure 10. Northwest Iowa Community College (NCC).

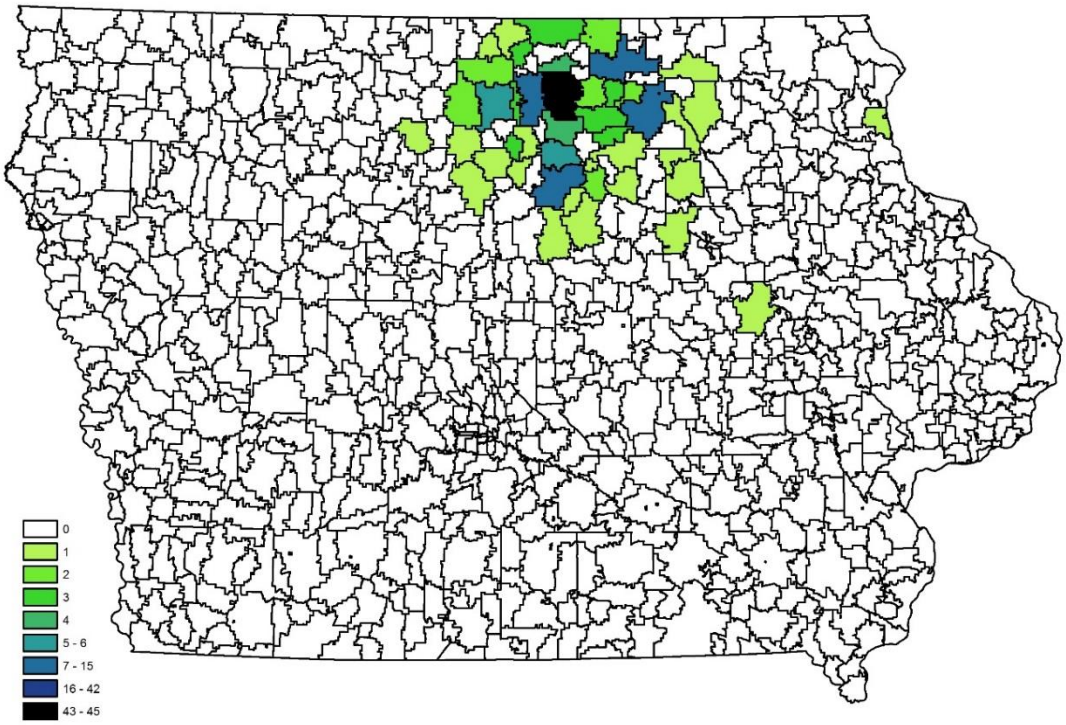

Figure 11. North Iowa Area Community College (NIACC).

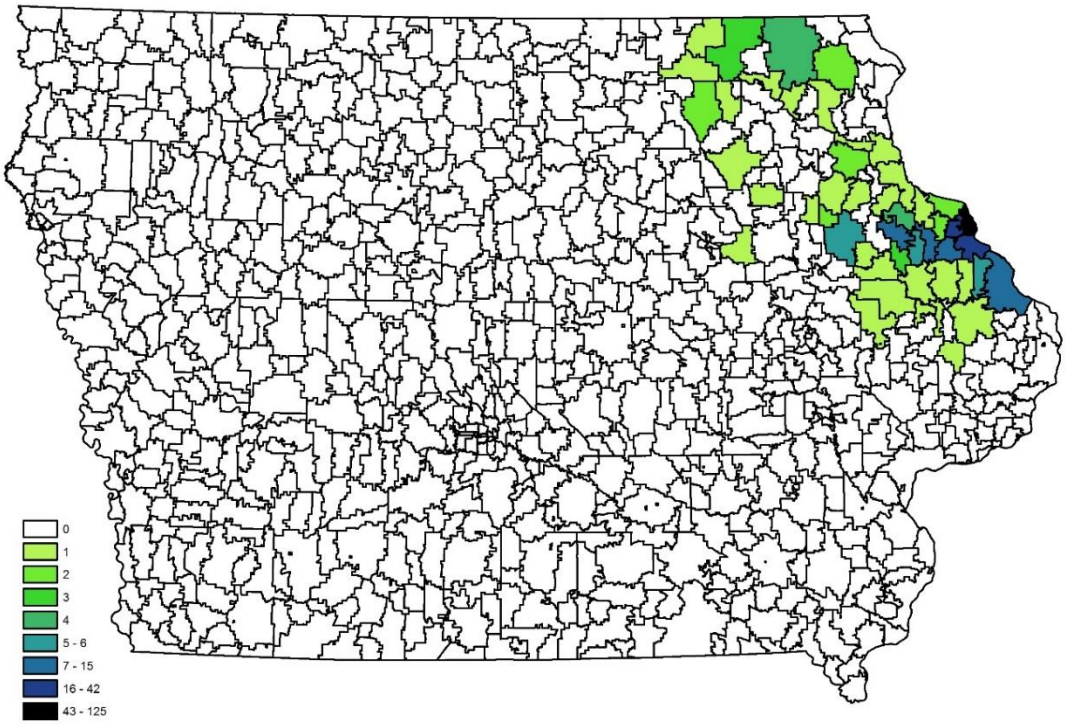

Figure 12. Northeast Iowa Community College (NICC).

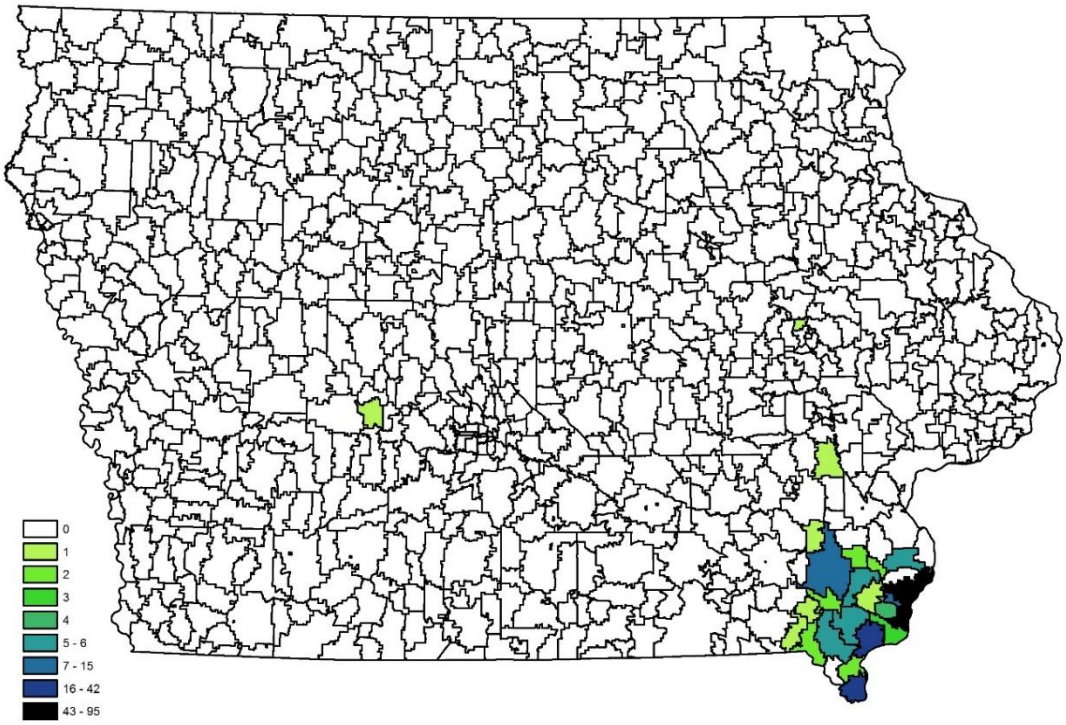

Figure 13. Southeastern Community College (SCC).

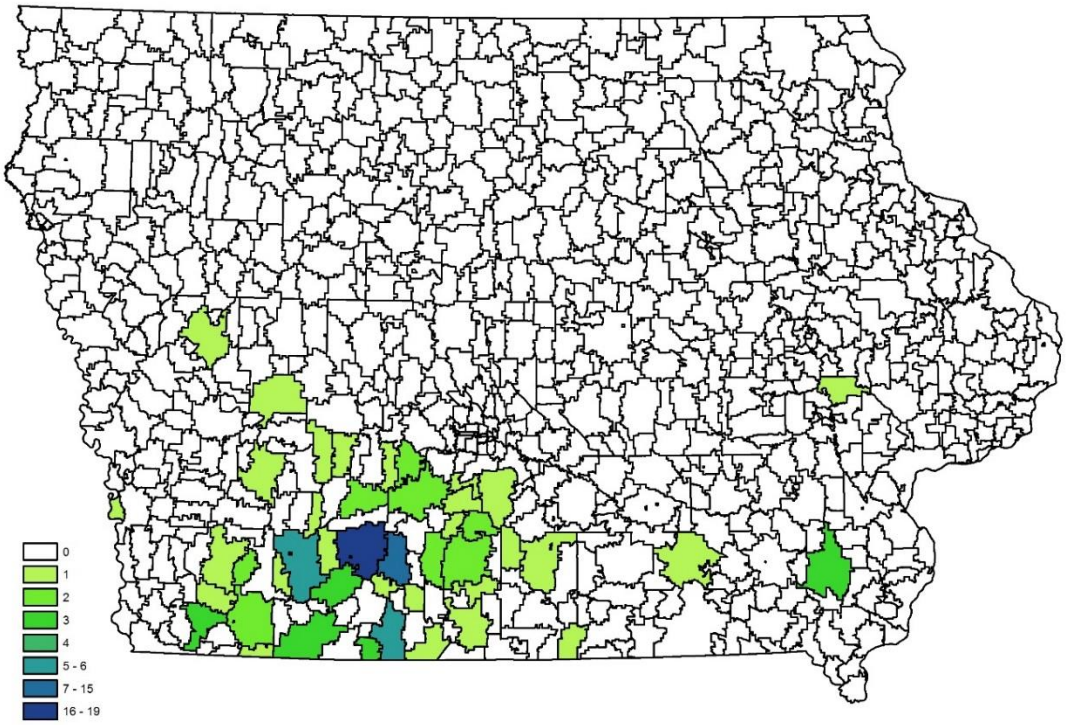

Figure 14. Southwestern Community College (SWCC).

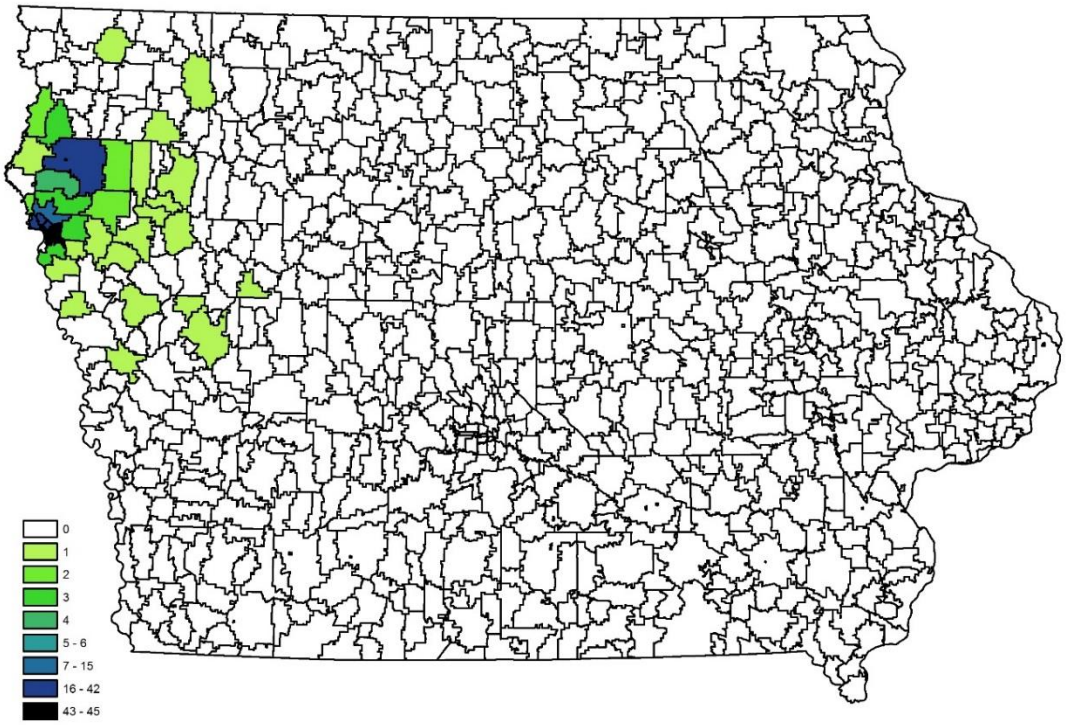

Figure 15. Western Iowa Tech Community College (WITCC).