

Butler Community College TAACCCT

Final Evaluation Report

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Butler Community College TAACCCT

Executive Summary

Overview of the Project

Butler Community College's (Butler) Trade Adjustment Assistance Community College and Career Training (TAACCCT) project expanded Butler's ability to respond to economic and workforce development needs in South Central Kansas by increasing the number of information technology (IT) credentialed individuals.

The project aimed to increase the education and skill attainment of TAA-eligible, veterans, and other dislocated workers for employment in the IT industry. Through Butler TAACCCT, industry credentials could be attained in a short period of time, with recipients entering the job market ready to work. The program sought to enroll 420 unique participants into an effective series of courses that stacked portable, industry-recognized credentials leading to certificates, job placement, and degree attainment.

The project created the Butler IT Institute and provided IT students with access to a set of core courses that imparted a basic set of skills and knowledge as well as academic and employment services to support their success. The project developed and awarded IT-related credentials and certifications. IT students could pursue certificates and/or AAS degrees in Cyber Security, Database Administration, Digital Media, Interactive & 3D Technologies, Internetworking Management, Software Development, Web Development, and Windows Administration.

Overview of the Evaluation Design

The Office of Educational Innovation and Evaluation (OEIE) at Kansas State University (K-State) served as the third-party evaluator for the Butler TAACCCT project. The evaluation approach included:

- 1) An implementation analysis aligned with Department of Labor (DOL) Solicitation for Grant Applications (SGA) questions, consisting of: a) methods to assess the progress and process of implementation; and b) qualitative methods to assess specific project components
- 2) An analysis of participant outcomes based on quantitative metrics consistent with DOL outcome measures, including comparison to non-participants

OEIE created a project logic model for use as a planning tool, to clarify and graphically display what the project intended to do and describe anticipated accomplishments/impacts. OEIE used the logic model and 12 evaluation questions to guide the evaluation. The findings sections (below) list the evaluation questions, which include the four DOL SGA and five other implementation questions, and three outcomes questions.

The goal of the evaluation was to provide feedback about how substantive systems change was unfolding at Butler and help identify effective principles to inform practices at the college and for a larger audience. The evaluation included formative evaluation to assess project performance and provide timely feedback to improve the project, as well as summative evaluation to assess and document major achievements and stakeholder outcomes. OEIE utilized multiple evaluation approaches, drew on both quantitative and qualitative methods, and sought input from various stakeholders to ensure the capture and representation of salient issues from multiple perspectives.

OEIE collaborated with Butler to determine the best methods for collecting evaluation data and develop instrumentation, to ensure the evaluation collected feedback that would be most useful for program planning and demonstrating project impact. OEIE also provided guidance to Butler as they tracked DOL metric and demographic data for the TAACCCT and control student groups. OEIE analyzed available outcome data for a comparison study.

Implementation Study Findings - SGA Implementation Questions

1. How was the particular curriculum selected, used, and/or created?

- Butler used the Economic Modeling Specialists, Inc. (EMSI) database as a resource for labor and wage data to identify eight existing Associate Degrees at Butler for the TAACCCT project. Butler developed 14 new certificates of completion ranging from 6 to 15 credit hours. Faculty made modifications to curriculum based on industry recommendations and added five blended or online courses.

- 2. How were programs/program designs improved/expanded using grant funds? What delivery methods were offered? What was the program administrative structure? What support/other services were offered?**
- Butler increased variations on certificates of completion and offered more job opportunities for different industry sectors. Faculty chose content experts in each field to review programs.
 - Butler offered courses through online, face-to-face, and blended formats. The majority of courses were taught face-to-face. However, Butler offered many programming courses online for distance students.
 - For curriculum modification, faculty sought the Dean's approval, and the Dean presented changes to the curriculum committee. Once changes were approved, they were reflected in the course catalog.
 - Butler TAACCCT staff worked with Butler offices (e.g., Career Placement, Student Life, Library, Registrar, Admissions, Tutoring) to provide student services. The academic coach provided services directly by assisting with resume and interview preparation as well as sharing internship opportunities with students.
- 3. Was an in-depth assessment of participant's abilities, skills, and interests conducted to select participants into the grant program? What assessment tools and processes were used? Who conducted the assessment? How were assessment results used? Were assessment results useful in determining the appropriate program and course sequence for participants? Was career guidance provided, and if so, through what methods?**
- Butler used a Compass or other placement exam for degree seeking students, administered by Advising. TAACCCT students completed enrollment with the academic coach, with exam scores used for placement.
 - Butler TAACCCT provided career guidance on the first day of classes and mid semester by talking to all students about career opportunities in their fields. Butler TAACCCT provided career pathways program sheets through hard copies, online, and social media, and they included a link on the IT Institute website to *Career Coach*, which allowed students to search for a job, career wage, and expected retirements in the field.
- 4. What contributions did each of the partners (employers, workforce system, other training providers and educators, philanthropic organizations, and others as applicable) make in terms of: 1) program design, 2) curriculum development, 3) recruitment, 4) training, 5) placement, 6) program management, 7) leveraging of resources, and 8) commitment to program sustainability? What factors contributed to partners' involvement or lack of involvement in the program? Which contributions from partners were most critical to the success of the grant program? Which contributions from partners had less of an impact?**
- The IT Institute advisory board (consisting of industry partners from each program area and Workforce Alliance), Wichita Police Department, and four-year colleges helped with program design and delivery.
 - Faculty participated in Quality Matters training and integrated material into online and blended courses.
 - Workforce Alliance assisted Butler by strengthening relationships with industry and tracking student data.
 - Partners volunteered services in hopes of improving the workforce to fill skills gaps. External partners provided students with company tours and demonstrations. Advisory board members assisted in placing students. Companies offered internships to TAACCCT students. The academic coach communicated the openings with students via email and a bulletin board located in the IT Institute.
 - Some partners' lack of involvement was attributed to insufficient communication from Butler TAACCCT leadership. Butler shared that recommendations/input from content experts was the most critical contribution made to the program and did not identify any contribution that had less of an impact (as all contributions were seen as valuable).

Implementation Study Findings - Other Implementation Questions

- 1. What is the progress toward implementing a program that meets the needs of student participants and industry, and what are the operational strengths and weaknesses?**
- External advisory board members reported being satisfied with the amount of information shared and the progress made toward the organization/implementation of the project.
 - Team members shared these strengths of the grant: enhanced curriculum (e.g., labs, hands-on activities), grant support from Butler staff and faculty, new equipment purchased by the grant, industry partnerships, and tracking students/measuring student success. Challenges included: staff turnover, pushback from faculty, unclear or inconsistent leadership, interpretation of DOL reporting requirements, lack of accountability for team members meeting expectations, and documenting/tracking students.

- TAACCCT students reported that the IT program is interesting, provides both content and experiences that are relevant to the current industry, offers course options that meet students' learning needs and goals as well as their scheduling needs, and is well worth the time required. Aspects of the program they liked best included: the faculty/instructors, equipment/software/tools/resources, the class structure, subject matter, and the learning that took place. Suggestions to make the program more successful were: improving resource availability/quality, increasing course availability/flexibility, and including more relevant real-world content.

2. *What are the vision and values that guide innovation?*

- The grant was guided by: Butler's core values, supporting student success, providing flexible course options, aligning curriculum with industry need, creating education/career pathways, and promoting integrity/quality.

3. *What are the institutional conditions and environment within which activities occur?*

- Most team members had all the resources and support they needed for their work on the grant. Some team members remarked that additional support, information, or resources would be helpful.
- Students' reasons for enrolling in the Butler IT training program most often related to: Butler offering specific courses or programs the students wanted, personal interest in the programs, low cost/affordability, preparing for a career change or new field, and gaining knowledge and skills in the subject area.
- Students rated overall satisfaction with the Butler IT program between "Satisfied" and "Very Satisfied."
- Over 1/2 of respondents reported experiencing each of the Butler IT class formats, including: traditional face-to-face (70%), online (67%), and blended (58%). Many respondents experienced all three formats (40%).
- Over 3/4 of student respondents agreed that Butler IT faculty/instructors: promote a respectful classroom environment, allow time in class for discussion/interaction, communicate clearly about important course topics, are willing to meet with students outside of class (to answer questions, provide guidance), make connections between course topics and their relevance to the industry, are up-to-date on knowledge of the industry, and are helpful in guiding them to understand course topics in ways that clarify their thinking.
- Students also agreed that the Butler IT classes: provide adequate space to facilitate learning, provide adequate software to meet learning objectives, arrange the space in a way that facilitates learning, arrange the space in a way that facilitates interaction, and provide adequate hardware/equipment to meet learning objectives.

4. *What factors affect and guide ongoing innovation and development?*

- Factors that affect and guide ongoing innovation included: budget, grant successes/results (data/outcomes), employment needs and industry demands, and innovations in technology.
- Experiences with the grant will influence future work through: planning grants better (e.g., creation of the grant team), making expectations about grant roles and requirements clear, creating guided pathways, including more people on the grant team, and setting and focusing on clear goals.
- Thoughts on sustaining grant components included: maintaining partnerships (advisory board, Workforce Alliance), staying current with technology, implementing guided career pathways, reviewing/modifying curriculum continuously, creating a Career Services office, and continuing student employment opportunities.
- Lessons learned frequently related to: the importance of team member involvement throughout the project, sharing clear expectations with and gaining buy-in from team members, establishing and communicating the structure of authority on the grant, and getting the right team in place.

5. *To what extent was there collaboration across instructional departments? What operational efficiencies were achieved through Butler's TAACCCT project?*

- Collaborations with other departments occurred due to new technology (e.g., green screen room, light board), and the entire college was moving toward guided career pathways and learning from TAACCCT experiences.
- Internal partners' greatest contributions were: communicating/cooperating with and supporting grant staff, taking grant components to the next level, projecting a positive attitude, and verifying/providing student data.
- The project influenced the structure or operations of IT training at Butler by: introducing academic coach support, increasing the online presence, creating guided pathways, and providing new/upgraded technology.

Outcomes Study Findings

- What is the difference in persistence, completion, and employment outcomes among students who utilize program services and those in other benchmarked technical education programs at Butler?**
 - The Butler TAACCCT grant served 657 unique students; 151 students (23.0%) completed one or more of the TAACCCT programs (i.e., credentials), including 73 incumbent workers (i.e., employed at enrollment).
 - Of 64 TAACCCT students who completed TAACCCT programs and were not incumbent workers: 15 students entered employment in the quarter after exiting Butler (8 of those students were retained in employment in the next two quarters); 29 students entered another education program; and 20 students did neither.
 - Of 225 TAACCCT students who were incumbent workers, 121 students (53.8%) received wage increases after enrolling in the TAACCCT program. Hourly wage increases ranged from \$0.05 to \$26.45 ($M = \$3.68$).
 - TAACCCT students completed a total of 283 credentials, including 112 degrees and 171 certificates designed to be completed in less than one year. Most frequently, students completed the BCC MSCA Windows 8 (6 hour) certificate ($n = 53$), the BCC MCSA Server 2012 (9 hour) certificate ($n = 29$), Networking 1 (12 hour) certificate ($n = 26$), Cyber Security A.A.S ($n = 25$), and Digital Media A.A.S. ($n = 23$).
 - The evaluation team completed eight Pearson chi-square analyses to statistically compare the DOL metrics for the TAACCCT and control groups. Higher proportions of TAACCCT students, as compared to control students: completed a program of study, were retained in a program of study, and earned credentials.

Butler TAACCCT vs Control Group Targeted Outcome Measures			
Targeted Outcome Measures	TAACCCT	Control	Statistic
1 – Total Number of Unique Participants Served	657	88	[no comparison possible]
2 – Total Number of Participants Who Have Completed a Grant Program of Study	151 (of 657) (23.0%)	4 (of 88) (4.5%)	$\chi^2 (1, N = 745) = 16.01, p < .001$ Cramer's $V = .15$
3 – Total Number of Participants Still Retained in Grant Program of Study (non-completers only)	148 (of 506) (29.2%)	8 (of 84) (9.5%)	$\chi^2 (1, N = 590) = 14.41, p < .001$ Cramer's $V = .16$
4 – Total Number of Participants Completing Credit Hours	575 (of 657) (87.5%)	75 (of 88) (85.2%)	$\chi^2 (1, N = 745) = 0.37, p = .545$ Cramer's $V = .02$
5 – Total Number of Participants Earning Credentials	151 (of 657) (23.0%)	4 (of 88) (4.5%)	$\chi^2 (1, N = 745) = 16.01, p < .001$ Cramer's $V = .15$
6 – Total Number of Participants Pursuing Further Education After Program of Study Completion	29 (of 151) (19.2%)	1 (of 4) (25.0%)	$\chi^2 (1, N = 155) = 0.08, p = .772$ Cramer's $V = .02$
7 – Total Number of Participants Employed After Program of Study Completion (non-incumbent only)	15 (of 64) (23.4%)	1 (of 4) (25.0%)	$\chi^2 (1, N = 68) = 0.01, p = .943$ Cramer's $V = .01$
8 – Total Number of Participants Retained in Employment After Program of Study Completion (non-incumbent only)	8 (of 15) (53.3%)	1 (of 1) (100%)	$\chi^2 (1, N = 16) = 0.83, p = .362$ Cramer's $V = .23$
9 – Total Number of Those Participants Employed at Enrollment Who Receive a Wage Increase Post-Enrollment (incumbent only)	121 (of 225) (53.8%)	10 (of 19) (52.6%)	$\chi^2 (1, N = 244) = 0.01, p = .923$ Cramer's $V = .01$

Note. The percentages for each metric are based on different total values, which each representing the total possible number for each metric (e.g., whether based on incumbent only, completers only, etc.). These numbers do not represent Butler's "final" data so may differ from Butler's final performance report.

- The evaluation team also compared TAACCCT and control group survey responses. TAACCCT students were more likely to report experiencing the online class format, as compared to students in the control group ($\chi^2 (1, N = 108) = 9.71, p = .002$). Two additional comparisons approached significance, in the direction of more TAACCCT students reporting 1) they experienced a blended class format ($\chi^2 (1, N = 108) = 2.92, p = .088$) and 2) their educational or career goals changed while in the program ($\chi^2 (1, N = 114) = 3.04, p = .081$).
- To what extent does the program use career pathways, academic instruction, and student support services to improve student outcomes?**
 - Overall project outcomes and impacts were: expanded relationships with workforce/industry, enhanced classrooms (technology, software, classroom redesign), guided pathways provided clearer path and/or led to student completion (i.e., degrees, certificates), provided opportunities for faculty to gain professional development and restructure teaching, improved/expanded student tracking process (to demonstrate grant outcomes), provided industry with access to a broader pool of recruiting, and students gained employment.
 - The grant increased Butler's capacity to meet industry and student educational needs. It provided career pathways/credentials for student training, enhanced/provided programs that met industry needs (3D, networking, cybersecurity), and provided current/relevant equipment to support curriculum.

- The grant improved Butler's relationships with regional employers and workforce development. It increased awareness of Butler IT programs by industry/workforce as well as provided students with knowledge of job opportunities (e.g., job posters), jobs/internships, and skills/knowledge to meet industry needs.
- TAACCCT students agreed that the program increased their technical knowledge ($n = 90$, 84.1%; $M = 4.36$) and technical skills ($n = 89$, 83.2%; $M = 4.36$).
- Students who used services reported: job search assistance (job board) provided information on job openings, shared what employers were looking for education-wise, and helped students find a job or internship; resume/interview preparation polished students' resumes, showed students how to act in an interview, and helped students gain employment; tutoring helped students on assignments and understanding course content; and internship notifications resulted in students' increased awareness of opportunities, applications for internships, and knowledge about specific opportunities.
- TAACCCT student respondents who interacted with industry employers during the Butler IT program rated this exposure to employers between "Very Helpful" and "Extremely Helpful" ($M = 4.27$). Impacts of interacting with industry employers were: building networks, gaining motivation, and learning about the industry.
- Students shared impacts of enrolling in the Butler IT program. They learned new knowledge and skills; gained confidence, motivation, and/or focus; obtained employment; gained networking connections; received a promotion at work; continued to a Bachelor's degree; and completed an Associate's or Bachelor's degree.

3. *To what extent does the program efficiently leverage resources to accomplish the stated program goals?*

- Butler leveraged internal resources by gaining assistance from other Butler offices/units (e.g., Advising, Registrar, Financial Aid). For example, Butler leveraged staff time and expertise to: install and maintain new equipment purchased through the grant, provide student services, and gain student data.
- Butler leveraged external resources for the grant through developing or modifying curriculum in collaboration with industry partners, and providing job opportunities and internships through industry partners.

Conclusions

Key lessons learned from the TAACCCT grant that will inform Butler's future projects include:

- Provide more communication and clarity at the beginning of the grant about how it is going to work and what is expected. Gain total commitment from all key players (e.g., faculty, administrators) prior to submitting the grant application. The role of faculty is critical, so their commitment/support must be gained in advance.
- Talk about sustainability throughout the project, so grant components can be included in future budgets. Make good purchasing decisions and incorporate long-range planning, especially for expensive equipment that requires continued licensing fees/upgrades. To continue, administrators must keep pushing it forward.
- Take time at the beginning of the project to get the right team in place (i.e., people who are a good fit for the grant roles). Adequately staff the grant; bring in all grant staff early and quickly replace staff when they leave.
- Establish and communicate the structure of authority on the grant. There must be someone in charge of the grant, with visible support from upper-level administrators, to move the project forward and hold team members accountable. Be very clear about expectations and responsibilities, and be willing to exercise accountability if team members are not completing responsibilities and meeting expectations.
- Increase visibility of the project at the college and in the community, to ensure everyone on campus knows what the grant is, where it is housed, who is involved, and its expected outcomes. Communication, both internal and external to the college, should be targeted and intentional throughout the grant to increase clarity for team members, the college, and the community. Take a proactive approach with engaging internal and external partners and maintain buy-in throughout the grant.

Implications for future work include:

- Implementation of the grant influenced Butler, but Butler knows more progress is needed to fully realize the goal of the grant related to institutional change for the college. Butler will be using grant successes as models to expand efforts on guided pathways, career services, and collaboration across instructional departments.
- Butler is taking a new approach to grants across the college. Butler now only applies for grants that fit within the college's strategic plan; sets/focuses on clear goals; gains buy-in/commitment prior to submitting grant proposals; ensures grants have oversight, continuity, and accountability; and makes expectations clear.

Overview of the Butler TAACCCT Project

The Butler Community College (Butler) Trade Adjustment Assistance Community College and Career Training (TAACCCT) project expanded Butler's ability to respond to the economic and workforce development needs in South Central Kansas by increasing the number of information technology (IT) credentialed individuals. The project was motivated, in part, by:

- the emergence of global technology leaders in the service area
- 25 Trade Adjustment Assistance (TAA) determinations in the service area
- the State of Kansas identifying IT as a high-demand sector of the state's economy
- the Kansas Board of Regents' (KBOR) expectations that institutions increase the number of industry-recognized credentials in targeted industries, including information technology

The project aimed to increase the education and skill attainment of TAA-eligible, veterans, and other dislocated workers for employment in the IT industry. Through Butler TAACCCT, industry credentials could be attained in a short period of time, with recipients entering the job market ready to work. The program sought to enroll a total of 420 unique participants into an effective series of courses that stacked portable, industry-recognized credentials leading to certificates, job placement, and degree attainment.

The project created an IT Institute at Butler and provided IT students with access to a set of core courses that imparted a basic set of skills and knowledge as well as academic and employment services to support their success. The project also involved developing and awarding various IT-related credentials and certifications. IT students could pursue certificates and/or engage in one of these A.A.S. degree programs:

- | | |
|--|--|
| <ul style="list-style-type: none">• Cyber Security• Database Administration• Digital Media• Interactive & 3D Technologies | <ul style="list-style-type: none">• Internetworking Management• Software Development• Web Development• Windows Administration |
|--|--|

These Butler curriculum options prepared students for occupations such as:

- Computer and Information Systems Managers
- Computer Support Specialists
- Graphic Designers
- Information Security Analysts, Web Developers, and Computer Network Architects
- Network and Computer Systems Administrators
- Software Developers, Application
- Software Developers, Systems Software

Overview of the Butler TAACCCT Evaluation

The Office of Educational Innovation and Evaluation (OEIE) at Kansas State University (K-State) served as the third-party evaluator for the Butler TAACCCT project and was responsible for monitoring and evaluating the implementation and impact of the project. OEIE came on board as the evaluator during the proposal phase. Appendix 1 contains the original evaluation plan submitted with Butler's TAACCCT proposal.

The Office of Educational Innovation and Evaluation

OEIE designed and implemented the evaluation for the Butler TAACCCT project. Founded in 2000, and affiliated with K-State's College of Education, OEIE provides a variety of independent evaluation services for an extensive range of projects in the fields of science, agriculture, education, health, and workforce development. OEIE is a full service evaluation office with 18 full-time professional staff members including evaluators, evaluation assistants, project development specialists, computer specialists, as well as part-time graduate and undergraduate research assistants. OEIE's multidisciplinary team complements each other's skills and possesses the education, fieldwork experience, and evaluation and research expertise relevant to the nature and scope of diverse projects.

OEIE's goal is to provide comprehensive evaluation services that:

- Strengthen projects by providing ongoing, systematic information that enhances evaluation of projects during their life cycle, and whenever possible, outcome data to assess the extent of change
- Use multidisciplinary approaches with a range of techniques to address important project questions
- Address contextual issues to identify problems and opportunities
- Create a participatory process that values multiple perspectives and involves a representation of people who care about the project
- Allow for flexibility so as to adapt and adjust to the needs of an evolving and complex project
- Build capacity that encourages ongoing self-reflection and dialogue on the part of every person involved with the evaluation

OEIE adheres to the American Evaluation Association's Guiding Principles for Evaluators and the Program Evaluation Standards of the Joint Committee on Standards for Educational Evaluation. Additional details about funded projects and services are available on OEIE's website (www.oeie.ksu.edu).

OEIE also served as the third-party evaluator on one Round 2 consortium and one Round 2 single-institution TAACCCT grants, and currently serves as the third-party evaluator on one Round 4 single-institution TAACCCT grant.

The Evaluation Approach

The Butler TAACCCT evaluation approach included:

- 1) An implementation analysis aligned with Department of Labor (DOL) Solicitation for Grant Applications (SGA) questions, with:
 - a) Methods to assess the progress and process of implementation
 - b) Qualitative methods to assess specific project components
- 2) An analysis of participant outcomes based on quantitative metrics consistent with DOL outcome measures, including comparison to non-participants

1a) Methods to Assess Implementation and Process:

- Document review and analysis of project records
- Review of project reports and meetings
- Assessment of progress related to timeline
- Interview with project leadership, administrators, & stakeholders

1b) Qualitative methods to Assess Project Components:

- Student surveys for qualitative feedback
- Faculty surveys for qualitative feedback
- Interviews with project leaders and/or key participants
- Interviews or surveys of industry representatives and/or stakeholders

2) Quantitative Methods to Assess Outcomes and Impact:

- Coordinated data collection and rigorous analysis of participant data, compared to non-participants, including the number:
 - completing the program
 - retained in program
 - completing credit hours
 - earning credentials
 - enrolled in further education
 - employed after the program
 - retained in employment
 - achieving increased wages

The Logic Model

During the planning stage of the project, OEIE created a logic model for the Butler TAACCCT project that could be used as a planning tool, to clarify and graphically display what the project intended to do, and to describe anticipated accomplishments and impacts. The logic model was included in the detailed evaluation plan submitted to DOL in May 2014 (see Appendix 2, page 10).

The Evaluation Questions

The evaluation was guided by implementation questions and outcomes/impacts questions. OEIE used the four implementation questions outlined by DOL in the Round 3 SGA, as well as a five other questions to guide the implementation study, and three questions to guide the outcomes/impacts study.

SGA Implementation Questions

1. How was the particular curriculum selected, used, and/or created?
2. How were programs and program designs improved or expanded using grant funds? What delivery methods were offered? What was the program administrative structure? What support services and other services were offered?
3. Was an in-depth assessment of participants' abilities, skills, and interests conducted to select participants into the grant program? What assessment tools and processes were used? Who conducted the assessment? How were the assessment results used? Were the assessment results useful in determining the appropriate program and course sequence for participants? Was career guidance provided, and if so, through what methods?
4. What contributions did each of the partners (employers, workforce system, other training providers and educators, philanthropic organizations, and others as applicable) make in terms of: 1) program design, 2) curriculum development, 3) recruitment, 4) training, 5) placement, 6) program management, 7) leveraging of resources, and 8) commitment to program sustainability? What factors contributed to partners' involvement or lack of involvement in the program? Which contributions from partners were most critical to the success of the grant program? Which contributions from partners had less of an impact?

Additional Implementation Questions

1. What is the progress toward implementing a program that meets the needs of student participants and industry, and what are the operational strengths and weaknesses?
2. What are the vision and values that guide innovation?
3. What are the institutional conditions and environment within which activities occur?
4. What factors affect and guide ongoing innovation and development?
5. To what extent was there collaboration across instructional departments? What operational efficiencies were achieved through Butler's TAACCCT project?

Outcomes/Impacts Questions

1. What is the difference in persistence, completion, and employment outcomes among students who utilize program services and those in other benchmarked technical education programs at Butler?
2. To what extent does the program use career pathways, academic instruction, and student support services to improve student outcomes?
3. To what extent does the program efficiently leverage resources to accomplish the stated program goals?

Summary of Evaluation Activities

Descriptions of evaluation activities conducted for the Butler TAACCCT grant appear below. Appendix 3 provides a comprehensive list of evaluation activities completed and deliverables provided to the Butler TAACCCT team over the four years of the grant. The list is organized by products (evaluation plan design, instrumentation, and reports/documents) and services (data collections, meeting/event attendance, and consultations). OEIE provided similar lists of evaluation deliverables to the team at the end of each quarter. Appendix 4 presents timelines for each project year of the Butler TAACCCT evaluation, highlighting events, data collection activities, and report submissions.

Development of the Detailed Evaluation Plan

OEIE collaborated with the Butler TAACCCT project team to develop and submit a detailed evaluation plan to DOL, in May 2014. Appendix 2 contains the detailed evaluation plan. The evaluation design was aligned to DOL expectations, and it was informed by current research and integrated into all components of the project, with the rigor and complexity needed for meaningful assessment. The evaluation incorporated a developmental evaluation approach and ongoing evaluation capacity building. The evaluation included formative evaluation to assess performance of project activities and provide timely feedback to improve the project, as well as summative evaluation to assess and document major achievements of the project and outcomes for stakeholders. The evaluation utilized multiple evaluation approaches and drew on both quantitative and qualitative methods, triangulating data for more robust findings where possible. The evaluation sought input from various stakeholders to ensure capturing and representing salient issues from multiple perspectives. The goal of the evaluation was to provide feedback about how this substantive systems change was unfolding at Butler and help identify effective principles that could be used to inform practice, both at the college locally and for a larger audience. DOL approved the detailed evaluation plan on July 23, 2014.

Submission of the Institutional Review Board Application

In August and September 2014, OEIE prepared and submitted an application for the K-State Institutional Review Board (IRB) to gain permission to collect evaluation data from stakeholders of the Butler TAACCCT project. OEIE submitted draft instrumentation with the application. OEIE received IRB approval from the K-State compliance office on September 16, 2014.

Instrument Development and Data Collection

The evaluation team collaborated with the Butler TAACCCT leadership team to determine the best methods for collecting evaluation data and develop instrumentation. Collaboration on instruments ensured the evaluation was collecting the types of information and feedback that would be most useful for program planning and demonstrating project impact. The evaluation team considered the evaluation questions in the development and design of all instrumentation seeking to collect evidence of progress and impact. Appendix 5 contains a sample of items used in evaluation instrumentation.

The evaluation team also collaborated with Butler TAACCCT leadership to coordinate details of data collections. The evaluation team conducted student surveys and project team interviews in Years 2, 3, and 4. In Year 2, OEIE also conducted focus groups with Butler IT faculty and TAACCCT administrators in follow up on data collected through the interviews, and conducted a survey with members of the TAACCCT

advisory board. In Year 4, OEIE conducted a survey with the control group students in addition to the annual survey of TAACCCT students. Survey methodologies were based on the Dillman Method (2014). Participants and response rates for each data collection are listed below.

- Year 2 interviews included Butler administrators ($n = 6$), faculty ($n = 5$), and grant staff ($n = 3$), with a 100% participation rate.
- The Year 2 student survey gained responses from 94 of 500 (19%) current TAACCCT students.
- The Year 2 faculty focus group had four Butler IT faculty, a 100% participation rate.
- The Year 2 administrator focus group had five Butler administrators, an 83% participation rate.
- The Year 2 advisory board survey gained responses from six (33%) external board members and eight (44%) internal Butler staff participants.
- Year 3 interviews included Butler administrators ($n = 4$), faculty ($n = 2$), and grant staff ($n = 2$), an 89% participation rate.
- The Year 3 student survey gained responses from 79 of 657 (12%) former and current Butler TAACCCT students.
- Year 4 interviews included Butler grant administrators and staff ($n = 5$), Butler high-level administrators ($n = 4$), workforce development partners ($n = 3$), Butler advising staff ($n = 2$), and employer partners ($n = 2$), a 100% participation rate.
- The Year 4 student survey gained responses from 107 of 657 (16%) former and current Butler TAACCCT students.
- The Year 4 control group student survey gained responses from 7 of 88 (8%) former and current students in the four CTE programs identified as the most similar to the IT program.

OEIE used the results of these evaluation methods to determine the aspects of the project that were valuable and to provide information for improving the project during implementation. Butler assisted by recruiting and encouraging participation of stakeholders in the data collections as well as developing schedules and coordinating logistics for onsite interviews.

Participation in Meetings

Throughout the project, OEIE participated in meetings and events related to the Butler TAACCCT project, both virtually and in person. These meetings included Butler TAACCCT team meetings, advisory board meetings, evaluation meetings, and other meetings as requested by the Butler TAACCCT team. Topics of evaluation meetings primarily included Butler's TAACCCT project implementation and collection/management of student metric data as well as OEIE's evaluation activities, instruments, data collections, results, reports, and formative feedback.

OEIE also participated in three TAACCCT-related meetings regarding the possibility of taking a statewide approach to TAACCCT performance reporting. Groups participating in the meetings included Washburn University, Butler, Johnson County Community College (JCCC), Wichita Area Technical College (WATC), the Kansas Board of Regents (KBOR), and OEIE.

- Washburn University organized the first meeting in April 2016 and included Butler, JCCC, WATC, and OEIE with a goal of gauging the other Kansas-based TAACCCT grantees' interest in and ideas for taking a statewide approach to TAACCCT performance reporting of employment metrics.
- KBOR organized the second meeting in January 2017 and included Washburn University and OEIE with the goal of understanding Washburn University's interest and purpose related to taking a statewide approach to TAACCCT performance reporting of employment metrics.

- KBOR organized the third meeting in August 2017 and included Butler, JCCC, and OEIE with the goal of explaining the opportunity (e.g., process and timeline) for participating in a statewide approach to TAACCCT performance reporting of employment metrics.

Professional Development

The OEIE evaluation team participated in a variety of professional development activities, including events organized through the Transformative Change Initiative (TCI) Evaluation Collaborative, DOL TAACCCT National Evaluation Team, and other TAACCCT grantees. In addition to the professional development activities, described further below, the evaluation team also reviewed TAACCCT-related documents and materials provided through these organizations.

Transformative Change Initiative Convenings

The TCI Evaluation Collaborative provided opportunities for third-party evaluators on TAACCCT projects with a transformative change focus to connect and discuss issues around evaluating such projects. The group holds face-to-face meetings where evaluators can share strategies and best practices from their projects and learn from others. Meetings in which an OEIE evaluation team member participated were:

- A meeting titled “Evaluating Employer Engagement in Community College TAACCCT Grants” on September 16 & 17, 2014 in Washington, D.C. This event focused on assessment of employer engagement within TAACCCT grants and challenges associated with collecting evaluation data related to employer engagement.
- A pre-meeting at the American Evaluation Association annual conference, on October 15, 2014 in Denver, Colorado. The meeting focused on evaluation of collective impact, transformative research, and discussion of evaluation theories and perspectives related to TAACCCT evaluations.
- A Learning Lab on February 17-18, 2015 in Baltimore, Maryland. This meeting brought together all rounds of TAACCCT consortium grantees as well as other education, workforce, policy, employer, evaluation, and other stakeholders. The convening focused on the topics of scaling and sustaining innovations beyond TAACCCT, and it provided opportunities to learn about transformative change strategies and exchange ideas with peers.
- A research symposium held in conjunction with the American Evaluation Association annual conference titled “Evidence of What Works from TAACCCT” on November 10, 2015, in Chicago, Illinois. This meeting brought together evaluators, governmental representatives, funders, and others. The OEIE evaluation team prepared a research paper and a presentation of evaluation results obtained on a Round 2 consortium grant that OEIE also evaluated. The meeting provided an opportunity to share results as well as hear results of other evaluations.
- A meeting held alongside the American Evaluation Association annual conference titled “Approaches to Evaluation that Foster Transformative Change” on November 11, 2015, in Chicago, Illinois. A speaker shared about fostering educational innovation through evaluation practices, using mixed methods, organizational evidence, and evidence-based storytelling.
- A meeting held June 22 & 23, 2016, in Chicago, Illinois. The meeting provided an opportunity to learn about the TCI’s recent work, including some research related to Round 1 TAACCCT grants. The group also discussed continuing collaboration on the work started in fall 2015 related to compiling lessons learned about transformative change within community colleges, based on their experiences working on TAACCCT grants (e.g., how various components were developed and implemented), and how the topics may impact community colleges in general (beyond TAACCCT).

TAACCCT National Evaluation Team Webinars and Virtual Roundtables

The TAACCCT National Evaluation Team hosted webinars to provide learning opportunities for grantees and third-party evaluators to exchange information and gain ideas to strengthen their evaluations. OEIE staff members attended 13 of these webinars. Topics of these TAACCCT webinars included:

- Preparing detailed evaluation plans
- Incorporating comparison groups and comparison group designs
- Conducting power analysis, related to the comparison study
- Obtaining student data
- Addressing data challenges
- Adapting evaluation designs to reality
- Evaluating partnerships
- Using qualitative methods with implementation analysis
- Presenting evaluation data with visualization techniques
- Preparing final evaluation reports

Other TAACCCT Convenings

The TAACCCT On! conference was organized and hosted by TRAC-7, a TAACCCT Round 1 consortium led by Washburn University in Topeka, Kansas. OEIE attended TAACCCT On! in October 2014 and September 2015, participating in sessions related to TAACCCT data management and evaluation.

An OEIE staff member attended a TAACCCT convening in Washington, DC on June 11, 2015. Although this meeting was held specifically for Round 4 grantees and evaluators, some information and resources provided at the convening were useful for the Butler TAACCCT project as well.

Document Review/Analysis

As part of the effort to monitor important shifts in program development and maturation, the OEIE evaluation team conducted a document review through the systematic examination of relevant materials provided by the Butler TAACCCT team via e-mail as well as additional documents posted by the Butler TAACCCT team on the SkillsCommons website (<https://www.skillscommons.org/handle/taaccct/142>). Documents that discussed program processes, evidence of goals met, and outcomes achieved were determined to be appropriate for the document review. For example, to document processes, OEIE requested materials such as handbooks and standard operating procedures. To document progress made, OEIE requested documents such as meeting agendas/minutes, products/grant deliverables, and reports.

Throughout the four-year project, OEIE organized 332 documents into four major categories: Meetings, Reports, Products/Outputs, and Operations/Processes. Each category was organized by subcategories and sorted by date. Details about each document, such as date, file name, and type, and descriptions of the content were entered into an Excel spreadsheet, with a separate worksheet for each major category. OEIE used this format for organizing archival documents throughout the grant to provide a comprehensive summary of key documents for the project, and provided the document review spreadsheet to the Butler TAACCCT team annually. OEIE shared the final spreadsheet along with this report.

The following list provides a breakdown of the 332 documents by major category and subcategory:

- | | |
|---------------------------------------|-----|
| • Products/Outputs | 122 |
| ○ Career Pathways Program Sheets (50) | |
| ○ Curriculum Modifications (30) | |
| ○ Participant Forms (29) | |
| ○ Articulation Agreements (5) | |
| ○ Data Files (4) | |
| ○ Presentations/Advertising (4) | |
| • Operations/Processes | 76 |
| ○ General Internal BCC Processes (22) | |
| ○ Memos (20) | |
| ○ Topics for Action (20) | |
| ○ Grant Compliance (14) | |
| • Meeting Agendas & Minutes | 74 |
| ○ Internal to BCC (74) | |
| • Reports | 60 |
| ○ Board of Trustees (33) | |
| ○ DOL (27) | |

In Year 2, OEIE also entered information from 26 career pathways program sheets into an Excel spreadsheet to show the stacks and lattices between the Butler TAACCCT certificates and degrees. Each program sheet listed the required courses to obtain either a Certificate of Completion or Associate's Degree. OEIE organized the Excel spreadsheet into two worksheets, by classes and credits required for each program. Conducting these analyses verified the stacks and lattices between the Butler TAACCCT programs. Through this process, OEIE identified that *IN105 Information Technology Concepts* is a requirement for 10 certificates/degrees and that the courses *IN112 HTML & CSS* and *IN131 Network Servers* are required courses for seven certificates/degrees. These courses provided the greatest opportunity for latticing certificates. The remaining courses were required for one to six certificates/degrees.

Reporting

With the submission of this Final Evaluation Report, OEIE prepared a total of 24 evaluation reports and summaries for the Butler TAACCCT team. These reports included: 11 event-specific reports containing results of evaluation data collections, 9 quarterly summaries, 2 annual evaluation reports (in Year 1 and Year 3), as well as the Interim Evaluation Report (in Year 2) and Final Evaluation Report (in Year 4).

When reporting to Butler, OEIE's goal was to prepare reports in a timely fashion to provide the TAACCCT team with an accurate picture of the program and activities, by presenting feedback and results in ways that would be easy to process and useful to the project. Much of the data collected early in the project were formative in nature, which was important as the project was implemented to help illustrate how the program was developed at Butler. More recent data collections continued to collect feedback on implementation but increased focused on outcomes and impacts.

Evidence Supporting the Evaluation Questions

Implementation Study Results

SGA Implementation Questions

OEIE collected preliminary evidence for the SGA questions in June 2015 through an interview with the Butler TAACCCT Director and in November 2015 through a meeting with Butler TAACCCT administrators. OEIE included the results in the Interim Evaluation Report. In summer 2017, OEIE collected updates to the SGA questions from the Butler TAACCCT team. The team's responses appear below ([in blue text](#)) along with supplemental evidence from OEIE's other evaluation data collections, as available.

1. How was the particular curriculum selected, used, and/or created?

Butler used the Economic Modeling Specialists, Inc. (EMSI) database as a resource for labor and wage data to identify existing Butler programs (Interactive 3D, Software Data, Digital Media, Internetworking Management, and Cyber Security) that comprised eight existing Associate Degrees at Butler for the TAACCCT project. Butler developed 14 new certificates of completion ranging from 6 to 15 credit hours required for attainment. Faculty made modifications to curriculum and added five blended or online courses. Some modifications were based on advisory board sub-group recommendations. The advisory board members include industry representatives from each of the five program areas.

Additional evidence in support of this evaluation question was collected through the Year 2 interviews, the Year 2 advisory board survey, and the Year 4 interviews.

Through the Year 2 interviews, team members shared that a success of the grant was creating and engaging the IT Institute advisory board, with broad representation of industry relevant to the IT Institute and the TAACCCT grant. The advisory board was seen as a major success of the grant because it was strategically built with content experts relevant to the Butler TAACCCT project's program areas, and it was used as a working group to help meet grant objectives (e.g., curriculum review and revisions). The IT program curriculum was revised based on industry input.

Through the Year 2 advisory board survey, external partners shared that they worked on curriculum development and perceived that the greatest value of their participation included their contributions to the curriculum/program development. The greatest perceived value of participation for internal team members participating in the advisory board was the interaction between Butler and industry/community partners and modifying the curriculum to meet industry needs.

Through the Year 4 interviews, participants shared that an external partner contribution was providing direction related to curriculum development and reviews.

2. How were programs and program designs improved or expanded using grant funds? What delivery methods were offered? What was the program administrative structure? What support services and other services were offered?

Butler expanded programs through increased variations on certificates of completion and offered more job opportunities for different industry sectors. Each program was reviewed by a content expert (subject

matter expert) in that field, with content experts chosen by the faculty. Butler submitted the Interactive & 3D Technologies program to KBOR with six modified courses and two new courses. The Web Development course was modified based on recommendations from content experts as well.

Courses were offered through online, face-to-face, or blended formats. The majority of courses were taught face-to-face. However, Butler offered many programming courses online for distance students.

The curriculum modification process consisted of faculty approaching the Dean for approval, and the Dean then presented changes to the curriculum committee. Once changes were approved, they were placed into the course catalog.

The Butler TAACCCT grant staff worked with a variety of offices to provide student services and provided services through their office directly with the hire of an academic coach. They worked with Career Placement Services to conduct a job panel interview; Student Life for an advising day and additional student activities/events; Library Services for assistance with open educational resources (OER) and uploading materials on the SkillsCommons website as well as sharing information with students; and the Registrar's Office to coordinate stamping the certificates of completion on students' transcripts. In addition, they worked with Admissions, the Diversity Coordinator, and the Tutoring Center. The academic coach provided assistance with resume writing, interview skills, and internship opportunities. The Butler TAACCCT grant staff provided a job board and listserv.

Additional evidence in support of this evaluation question was collected through the Year 3 interviews.

Through the Year 3 interviews, team members shared insights into grant components and processes:

- When looking for support on grant activities, they typically referred to Butler administrators, grant staff, faculty chairs, and external partners (local businesses, employer/industry representatives, Workforce Alliance, admissions contacts at other colleges), who they considered valuable collaborators.
- Changes to the organization and structure of the Butler TAACCCT team in Year 3 helped with improving communication, clarity about the grant, team dynamics, and productivity. For example:
 - The team had a new organizer who set regular meetings, tracked progress on the grant, and kept the team aligned, which allowed the team to be on track and move forward on a unified path.
 - The team was streamlined. People who were reluctant about working on the grant were relieved of their grant responsibilities, so that all remaining team members were invested and supportive.
 - All meetings amongst current team members were smoother and more productive; tension experienced at previous meetings with the larger team was eliminated.
 - Having a smaller team allowed team members to work more closely with each other.
 - Lines of authority were clarified. Oversight increased, and the new leadership was more invested and supportive.
 - Weekly meetings allowed for assigning specific actionable tasks, and then checking in about progress the following week. The team discussed grant activities/tasks and identified courses of action.
 - Communication on the grant was more open, and clarity about the grant improved. Team members spread information about the grant to faculty, administrators, and students.
 - New team members learned about the grant, which helped emphasize the importance of the project to Butler in general rather than just specifically for IT.

- Team members described the administrative side of the grant, including processes for enrolling students, providing student services, and following up with students. At that point, much of the administrative part of the grant was handled by TAACCCT staff, specifically the academic coach.
 - Enrolling Students
 - Students started with the typical Butler enrollment process through the admissions office. Students interested in IT had an advisor who was aware of the TAACCCT grant and referred students to the academic coach. Then, the academic coach spoke with the student, provided a tour, and enrolled them in the grant.
 - Two weeks before classes start, the academic coach reviewed the IT class rosters to identify new students who were not yet enrolled in TAACCCT.
 - The first week of each semester, TAACCCT grant staff and faculty visited classrooms to provide a presentation to new students about the TAACCCT grant and the services available through the academic coach, and allowed students an opportunity to enroll in the grant. If students were interested in participating in the grant, they completed enrollment paperwork in class, which included declaring a major in an IT program of study. Faculty returned the paperwork to the academic coach.
 - There was an online course module for enrolling online students in the TAACCCT grant. TAACCCT staff notified faculty when online students were participating in their course.
 - The academic coach entered student data into the TAACCCT student tracking spreadsheet, and the student worker created a hard-copy student folder for each new student.
 - Providing Student Services
 - Faculty referred TAACCCT students to grant staff if they were in need of help related to the grant.
 - The academic coach worked with faculty chairs to identify internship or employment opportunities, and helped students gain these opportunities. The academic coach sent email blasts to students with employment and internship announcements.
 - The academic coach assisted with enrollments, degree checks, transferability, resume and cover letter preparation, mock interviews, and job search assistance.
 - The academic coach and faculty referred TAACCCT students to other Butler services when needed, such as financial aid and tutoring.
 - Following Up with Students
 - Each May, the academic coach reviewed the student tracking spreadsheet and files to identify any students who graduated, stopped going to class, or were still enrolled in classes.
 - The academic coach sent certificates of completion to students by email, after confirming completion of requirements and obtaining signatures from the registrar, dean, and faculty.
 - The academic coach regularly followed up by telephone with students who completed certificates or degrees to ask if they gained employment or a promotion at their current job and their salary, or if they enrolled in further education.
- To conduct recruitment/outreach to attract students to IT programs, Butler TAACCCT primarily:
 - Used typical, general Butler marketing that was not program specific because TAACCCT did not have a marketing budget and there was difficulty getting program-specific assistance from Butler's marketing office
 - Created and updated web pages related to the TAACCCT project and relevant IT programs
 - Posted information on social media to encourage students to come to campus and visit the TAACCCT staff and enroll in programs, shared things advisory board members were doing,

- and advertised new equipment and spaces available through the grant
- Relying on word of mouth through satisfied students
 - Used radio commercials for at least one IT program
 - Used special messages oriented toward attracting potential students who met DOL criteria for displaced workers and veterans
 - Made Butler appear a smart option for incoming students by lining up internship opportunities, offering unique programs not offered elsewhere in the local area, and creating articulation agreements with four-year universities
 - Contracted with the Workforce Alliance of South Central Kansas (Workforce Alliance) to gain job placement assistance
 - Faculty and the dean recruited for the IT programs by making appearances in public, making connections with local businesses and other institutions, and using these opportunities to talk about Butler IT programs
 - Participated in quarterly meetings with county superintendents and other staff (e.g., principals, counselors, curriculum specialists) to give updates on the academies, program changes, and Senate Bill 155 funding
 - Partnered with Learn Wichita to participate in college fairs
 - Attended veteran events to share information about the IT programs
 - Asked advisory board members to mention the IT programs in the community and refer potential students to Butler
 - Admissions referred incoming students interested in IT to the TAACCCT academic coach
 - Provided tours to students on campus so they could see the new equipment and spaces
 - Worked in conjunction with the early high school IT academy at Butler, whose staff visited local high schools to speak with students and make them aware of IT program options at Butler
 - Visited high schools to talk with graduating seniors and encourage them to visit Butler for a tour of the IT classrooms and equipment
 - Set up a table at Grizzly Senior Day, and provided information about the TAACCCT program
 - Academic coach visited classrooms to make sure enrolled students were aware of available services and assistance through the college and grant, which helped with retention
 - Sent letters to students who stopped going to classes (e.g., been away for a year)
- Some team members believed no further changes were needed to the organization or structure of the team. Some team members mentioned they expected to be in a better position once new team members (project manager and instructional technologist) were on board to help wrap up the grant. A couple of team members stressed the importance of having someone take ownership of the grant who had power for accountability, and the new project manager would be able to do that in collaboration with the dean and grants manager.

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

Butler has an established policy of using a Compass exam or other placement exam for degree seeking students. The Advising department administers placement exams. The TAACCCT students were then sent to the academic coach to complete the enrollment process. The Butler TAACCCT team used the students' scores for placement. Career guidance was provided on the first day of classes and again at mid semester.

This consisted of the project management team talking with all students about career opportunities within their program of study. Butler TAACCCT also provided information on career pathways for all of the programs on hard-copy program sheets, online, and through social media. The IT Institute website had a link to Career Coach (<https://butlerit.emsicareercoach.com/>), which was a product of EMSI, and it allowed students to search for a job, find a career wage, and identify how many current employees in the field are retiring or expected to retire.

- 4. *What contributions did each of the partners (employers, workforce system, other training providers and educators, philanthropic organizations, and others as applicable) make in terms of: 1) program design, 2) curriculum development, 3) recruitment, 4) training, 5) placement, 6) program management, 7) leveraging of resources, and 8) commitment to program sustainability? What factors contributed to partners' involvement or lack of involvement in the program? Which contributions from partners were most critical to the success of the grant program? Which contributions from partners had less of an impact?***

The IT Institute advisory board membership had representation from industry for each of the program areas and the Workforce Alliance. The advisory board, Wichita Police Department, and four-year colleges helped with program design and delivery. The Workforce Youth Collaborative meetings were a helpful resource for program design as well.

The advisory board and Wichita Police Department worked with the faculty on curriculum development. Faculty participated in the Quality Matters training and integrated the material into the online and blended courses with the assistance of the instructional technologist. In addition, external partners provided students with company tours and demonstrations (e.g., showing how a machine works or showing the results of code).

Several advisory board members assisted in placing students. Initially the advisory board was chaired by a member of the Butler TAACCCT team to get it up and running. Then, the advisory board elected an industry partner as chair. As of summer 2017, there had been no leveraged resources and no commitments for program sustainability from external partners.

The Butler TAACCCT team and the Workforce Alliance partnered in November 2016. This partnership focused on strengthening relationships with industry. One of the first events was an IT Advisory Board Open House at Butler. Members of workforce and industry attended and the Dean had a short presentation on the TAACCCT programs, and then toured the labs where faculty and students demonstrated skills being taught. Also, the Project Manager and Associate Dean attended Workforce Alliance monthly board meetings. At one meeting, Workforce Alliance had an IT Employer Panel with four local IT experts discussing where employment growth is occurring and the skills needed within the industry.

Several companies offered internships. Butler had students take advantage of these and be successful. However, Butler was not able to fill all internship opportunities. Students have limited time with school, home, and work commitments. The Butler TAACCCT academic coach communicated the openings with the participants via email and the bulletin board located in the IT Institute.

As of summer 2017, Butler's Associate Dean was working with Student Services on creating a Career Service Center. A proposal was presented during the spring 2017 semester to an internal committee with

the mission and vision of the center. Further plans will be developed to hire a Director of Career Services. This will benefit students and external partners beyond the TAACCCT grant.

Partners demonstrated their involvement through volunteering services in hopes of improving the workforce to fill skills gaps. The Director attributed some partners' lack of involvement to insufficient communication from Butler TAACCCT leadership. The Butler TAACCCT Director identified the recommendations and input from the content experts as the most critical contribution made to the program and did not identify any contribution that had less of an impact (as all contributions were seen as valuable).

Partner involvement increased over the final three quarters. As of summer 2017, Butler was working with Workforce Alliance, Blueprint for Regional Economic Growth (BREG), the local Small Business Development organization, and the Department of Commerce to host a Cyber Security event during the fall 2017 semester. This event will target small businesses and is an example of the strong partnerships established through TAACCCT and sustained efforts beyond the grant.

Additional evidence in support of this evaluation question was collected through the Year 2 advisory board survey as well as the Year 3 and Year 4 interviews.

Through the Year 2 advisory board survey, external partners shared that they worked on developing curriculum, promoted/marketed the programs, recruited/referred students to programs, and participated in meetings to advance project goals. In addition, external partners shared that the greatest value of their participation in the TAACCCT grant was contributing to the curriculum/program development and improving job placement for completers.

Through the Year 3 interviews, team members spoke about collaboration with external entities, such as industry representatives and the Workforce Alliance, through the advisory board. Industry representatives provided advice, served as resources, helped with curriculum revisions, and placed Butler TAACCCT students in internships and full-time employment. Workforce representatives also assisted in connecting students with job opportunities to which they would not otherwise have had access. These external collaborations resulted in students being better prepared for program completion and employment. They also reported that faculty across different IT programs did not engage equally with industry representatives, and some team members said they wished the grant team had more broadly engaged in external collaborations earlier in the project. However, it was recognized that Butler made strides to develop better and more efficient processes for engaging external partners, resulting in improved programs, higher visibility in the community, and student placements.

Through the Year 4 interviews, participants identified external partners' greatest contributions to the TAACCCT project, which included: providing internship or other training opportunities, participating in the advisory board, providing feedback on industry needs, increasing engagement with Butler, and providing field trips/tours for students and staff. External partners also assisted with tracking students and obtaining student data, promoting Butler IT programs in the community, providing direction related to curriculum development and reviews, and recruiting students to Butler IT programs.

Additional Implementation Questions

- What is the progress toward implementing a program that meets the needs of student participants and industry, and what are the operational strengths and weaknesses?**

Progress Compared to Proposed Work Plan

Butler's TAACCCT proposal contained a Work Plan. DOL requested modifications to the plan when the Butler TAACCCT project was funded, and Butler revised the plan accordingly. One component of the evaluation entailed documenting progress made toward project activities within the proposed timeframes, as specified within the revised work plan. The table below presents information from Butler's Work Plan, along with new columns regarding achievement of the goal and sources of evidence supporting the achievement. The table below indicates that Butler achieved progress on almost all proposed Work Plan activity milestones. The exceptions are the utilization of Brainbench, which Butler decided was not applicable, and the signing of revised articulation agreements that existed when TAACCCT was funded, although Butler did make progress toward reviewing and revising existing articulation agreements as well as developing and signing new articulation agreements.

Achievement of Proposed Work Plan Activities				
Milestones	Proposed Timeframe	Achieved	Sources for Evidence of Achievement	
Priority/Core Element 1: Evidence-Based Design				
Activity 1.1 Develop a dynamic skills-based, workforce-centered model of education and training				
EMSI database acquired	Q1	✓	Butler document review, interviews with Butler TAACCCT team members, IT Institute webpages, evaluation meetings with Butler TAACCCT team	
Model developed	Q4	✓		
Training developed	Q5	✓		
Training provided	Q5	✓		
Model implemented in IT Institute	Q6	✓		
Activity 1.2 Design and delivery of evidence-based programs that focus on core skills to train students and augment existing foundation of skills				
Meetings held	Ongoing	✓	Butler document review, interviews with Butler TAACCCT team members, IT Institute web pages, evaluation meetings with Butler TAACCCT team, student surveys, advisory board survey	
Skills documented	Ongoing	✓		
Link with student support service	Q4	✓		
Student support process identified	Q6	✓		
Curriculum developed	Q12	✓		
Course delivery models designed	Q12	✓		
Approval documented	Q12	✓		
Student placement	Q12	✓		
Priority/Core Element 2: Stacked and Latticed Credentials				
Activity 2.1 Engage stakeholders to review and re-design curriculum to support new model and align with industry-driven and –recognized credentials and skills				
Meetings with Advisory Board	Ongoing	✓	Butler document review, interviews with Butler TAACCCT team members, IT Institute web pages, evaluation meetings with Butler TAACCCT staff, advisory board survey	
Meet with industry partners	Ongoing	✓		
Skills and credentials documented	Q8	✓		
Map completed	Q12	✓		

Achievement of Proposed Work Plan Activities				
Milestones	Proposed Timeframe	Achieved	Sources for Evidence of Achievement	
Activity 2.2 Design system to assess and award prior and current learning				
Link with assessment services	Q4	✓	Butler document review, interviews with Butler TAACCCT team members, evaluation meetings with Butler TAACCCT team, communications from Butler TAACCCT administrator	
Meetings held	Ongoing	✓		
Brainbench utilized	Q10	N/A		
Online proctoring implemented	Q10	✓		
Competencies documented	Ongoing	✓		
Process for students to move from testing to exit established	Q12	✓		
Priority/Core Element 3: Transfer and Articulation				
Activity 3.1 Review existing articulation agreements with IHEs and accrediting agencies to identify modifications to improve the transfer of credit				
Gaps identified	Q4	✓	Butler document review, interviews with Butler TAACCCT team members, evaluation meetings with Butler TAACCCT team, communications from Butler TAACCCT administrator	
Meetings held	Ongoing	✓		
Articulation agreements reviewed	Q6	✓		
Modified agreements signed	Q12			
Checklist completed	Q12	✓		
Activity 3.2 Collaborate with colleges and universities to develop new articulation agreements				
Meetings held	Ongoing	✓	Butler document review, interviews with Butler TAACCCT team members, evaluation meetings with Butler TAACCCT team, communications from Butler TAACCCT administrator	
Articulation agreements developed	Ongoing	✓		
Agreement signed	Q16	✓		
Priority/Core Element 4: Advanced Online and Technology-enabled Learning				
Activity 4.1 Incorporate technology into program design and delivery				
Software/equipment purchased	Q3	✓	Butler document review, interviews with Butler TAACCCT staff, evaluation meetings with Butler TAACCCT staff, IT Institute facility tour, communications from Butler TAACCCT administrator	
Equipment installed	Q4	✓		
Training provided	Q6	✓		
Course modification checklist	Q12	✓		
Activity 4.2 Integrate technology to increase access and enhance learning				
Instructors trained	Q6	✓	Butler document review, interviews with Butler TAACCCT staff, evaluation meetings with Butler TAACCCT staff	
Online courses finalized using QM (Quality Matters) principles	Q12	✓		
Priority/Core Element 5: Strategic Alignment				
Activity 5.1 Coordinate with employers and industry				
Meetings held	Ongoing	✓	Butler document review, interviews with Butler TAACCCT staff, IT Institute webpages, evaluation meetings with Butler TAACCCT staff, advisory board survey	
Career pathways developed	Q12	✓		

Achievement of Proposed Work Plan Activities			
Milestones	Proposed Timeframe	Achieved	Sources for Evidence of Achievement
Activity 5.2 Coordinate with the public workforce system, IHEs, and others			
Stakeholders identified	Q4; Ongoing	✓	Butler document review, interviews with Butler TAACCCT staff, IT Institute webpages, evaluation meetings with Butler TAACCCT staff, student survey, advisory board survey
Meetings held	Ongoing	✓	
Agreements completed	Ongoing	✓	
Information disseminated	Ongoing	✓	
Tracking developed	Q6	✓	

Status of Butler's TAACCCT Interventions According to Butler TAACCCT Team

OEIE collected preliminary evidence for progress toward components of Butlers' TAACCCT intervention in June 2015 through an interview with the Butler TAACCCT Director and in November 2015 through a meeting with Butler TAACCCT administrators. OEIE provided the results in the Interim Evaluation Report. In summer 2017, OEIE collected updates from the Butler TAACCCT team. The team's responses are provided below in blue text.

1. Completion of skills-based, workforce-centered model of training and education; learning outcomes of training provided on model; stakeholder involvement in development of evidence-based model - **The model was developed and training was delivered to the faculty with the goal of increased awareness. In addition, the model was discussed at every grant team meeting.**
2. Development of stacked and latticed credentials for IT occupations and 15 credit hour IT core skills curriculum that, combined, provide Career Pathways Maps for participants; stakeholder involvement in development - **The career pathway maps and 15 credit hour IT course skills curriculum were completed. Stakeholders were involved in this process during the first advisory board meeting. Courses found in each of the programs include: IN105, IN106, IN172, and IN183.**
3. Increase access and usage of online/blended learning for 5 IT courses - **IN105, IN123, IN166, IN2001, and IN2017 were the original 5 IT courses that were changed to an online or blended format. In addition, IN148 and IN162 were converted to an online/blended format. These courses increased opportunities for students.**
4. Student support services provided and student usage of support services - **This process was completed. Butler developed a log detailing each student and the services they used.**
5. Process to assess skills and award credit for prior learning is adopted and utilized; Butler CC's PLA policy (before and after) - **Butler awarded credit for PLA using the plan already in place, primarily for military experience. However, new legislation related to credit for prior learning streamlined the existing process.**

6. Review and update of existing articulation agreements; Checklist of key requirements for inclusion in articulation agreements; Establishment of new articulation agreements - Butler reviewed existing articulation agreements, developed a checklist of key requirements, and established new agreements. Establishing new articulation agreements was continuous.
7. Faculty training outcomes for Lecture Capture Software and enhanced classrooms - Trainings were developed and offered. The instructional technologist planned to offer 30 trainings. In addition, each of the trainings were recorded and available to faculty online.
8. Integration of 5 IT courses for online/blended learning - Five courses were enhanced, with the online/blended portion.
9. Implementation of Quality Matters criteria - Quality Matters was implemented into the curriculum.
10. Stakeholder involvement in creation of Employment Pathways - Stakeholders were involved in the creation of employment pathways/career pathways process.
11. Partnership agreements created and a system to track participant re-entry into the workforce established; stakeholder involvement in development - Butler partnered with the Workforce Alliance in November 2016. This partnership included: assistance with data collection and participant file management, follow-up training for all participants, and assistance to recruit private sector employers and industry representatives for engagement with the TAACCCT Advisory Board. The Project Manager worked with Workforce Alliance to send surveys out to all participants to gather employment and wage data. Efforts took place to track the participants who did not respond to the surveys. In addition, Workforce Alliance assisted participants with job searches by sending daily job postings to those who were interested. They also helped Butler strengthen industry relationships by collaboration with BREG.

Evidence from Additional OEIE Data Collections

Additional evidence in support of this evaluation question was collected through the Year 2 interviews, the Year 2 advisory board survey, the Year 3 and Year 4 interviews, and the Year 4 TAACCCT student survey.

Through the Year 2 interviews, the TAACCCT team shared strengths of the project related to: grant products/processes, relationships, resources, and communication. Challenges of the project related to: team dynamics, progress delays/losses, lack of clarity related to the grant, issues with facilities and equipment, and communication.

The Year 2 advisory board survey revealed that all responding external board members and three-quarters of the responding internal Butler staff participants were satisfied with the amount of information about the project that had been shared with them and with the amount of progress that had been made toward the organization and implementation of the project.

Through Year 3 interviews, team members shared:

- The TAACCCT components perceived as most helpful to students, because they contributed most to student success or completion, included:
 - Use of current, up-to-date technology that was also used in industry

- Hardware examples – computers, green screen; Software examples – Adobe, Autodesk
- Updated, relevant curriculum content consistent with industry needs
- A dedicated academic coach in the building who worked well with students and faculty and provided students with constant contact throughout the program and helped with resumes and mock interviews
- Identification of additional job openings in the local area (e.g., through research by academic coach, partnering with Workforce Alliance)
- Connections with industry partners for internship, employment, and scholarship opportunities
- Instructional approach that encouraged students to problem solve (e.g., Google it)
- Latticed credentials and certificates of completion
- Butler needed to be more proactive about creating additional partnerships and securing new articulation agreements. Also, due to how the grant unfolded, the expectations and vision for the grant were strategically modified. It was perceived that it would take longer than the grant period to see expectations met by way of transformational changes to how Butler integrated career pathways on latticed chains, with common knowledge, skills, and abilities allowing lateral movement across divisions.
- Expectations were met in the following ways:
 - Improving the IT curriculum
 - Upgrading the equipment for IT programs
 - Creating new partnerships with industry representatives
 - Securing new articulation agreements with higher education institutions
 - Working as a collaborative team
 - Some faculty utilizing the new equipment and participating in training
 - DOL providing good support
- Expectations were not met related to:
 - The government shut down right after the grant was funded, causing delays at the start of the grant
 - Turnover was experienced with Butler team members at the grant and administrator levels
 - Some faculty were not willing to collaborate on the grant
 - Grant staff's roles were somewhat different than expected due to other staff's turnover as well as some faculty's reluctance to participate in the grant
 - Faculty expected higher enrollments specifically due to the TAACCCT grant, but there was no evidence to support this because Butler was not tracking whether students enrolled due to TAACCCT, only whether they enrolled in TAACCCT; while enrollments increased, this was a pattern that began before the grant started
 - The partnership with Workforce Alliance occurred later in the project than expected
 - Job placement rates were lower than expected for program completers

Through the Year 4 interviews, participants shared:

- Strengths of the grant included: the enhanced curriculum (e.g., labs, hands-on activities), grant support from Butler staff and faculty, the new equipment purchased by the grant, industry partnerships, and tracking students/measuring student success.
- Challenges related to the grant included: staff turnover, pushback from faculty, unclear or inconsistent leadership, interpretation of DOL reporting requirements, lack of accountability for team members meeting expectations, and documenting/tracking students.

- Over half of participants who were asked reported that the Butler TAACCCT project met their expectations overall. Other participants indicated that the project, at that time, appeared to be on track and closer to meeting expectations and/or indicated that overall the project did not meet expectations. Most frequently, participants shared these specific ways that expectations were or were not met:
 - Expectations related to external partnerships (e.g., industry, institutions, workforce) had not been met
 - Unsure if expectations related to students were met
 - Curriculum modifications met expectations
 - Faced challenges obtaining student tracking data, which created difficulty to meet expectations
 - Good working relationships with other departments helped meet expectations

Evidence from the Year 4 TAACCCT student survey included:

- Over three-quarters of the student respondents agreed that:
 - *The program is interesting.* ($n = 92$, 86.0% agreed or strongly agreed; $M = 4.39$ on a five-point Likert scale)
 - *The program provides content that is relevant to the current industry.* ($n = 95$, 88.8%; $M = 4.30$)
 - *I would recommend the program to a friend or coworker.* ($n = 85$, 79.4%; $M = 4.15$)
 - *The program is well worth the time required.* ($n = 87$, 81.3%; $M = 4.13$)
 - *The program provides experiences that are relevant to the current industry.* ($n = 87$, 81.3%; $M = 4.11$)
 - *The program offers course options that meet students' learning needs and goals.* ($n = 85$, 79.4%; $M = 4.06$)
 - *The program offers course options that meet students' scheduling needs.* ($n = 84$, 78.5%; $M = 4.01$)
- Aspects of the program that respondents liked best included: the faculty/instructors, equipment/software/tools/resources, the class structure, subject matter, and learning that took place.
- When asked what Butler needed to do to make the IT program more successful, responses most often related to: improving the availability and/or quality of resources, increasing course availability or flexibility, and including more relevant, real-world content.

2. What are the vision and values that guide innovation?

Evidence in support of this evaluation question was collected through the Year 4 interviews.

Year 4 interview participants described the vision and values that guided Butler's innovations for the TAACCCT project. Participants most frequently mentioned that Butler's TAACCCT grant was guided by:

- Integrating Butler's core values
- Supporting student success
- Providing flexible course options
- Aligning IT curriculum with industry needs
- Establishing educational/career pathways
- Promoting integrity and quality
- Upgrading equipment

3. What are the institutional conditions and environment within which activities occur?

Evidence in support of this evaluation question was collected through the Year 3 interviews as well as the Year 4 TAACCCT and control group student surveys.

Team member interviews in Year 3 provided the following evidence related to the institutional conditions and environment at Butler:

- Communication related to the Butler TAACCCT grant occurred internally within Butler as well as with external partners.
 - Within Butler, team members including grant administrators, grant staff, and instructors interacted with each other through regular team meetings and by email, telephone, and in person. Communication also involved reaching out to Butler staff in other offices that provided support to the grant (e.g., advisors, facilities) as well as students to provide information and updates on the grant. Communication assisted with planning for and making progress on grant activities.
 - Externally, grant team members communicated with employers, local businesses, advisory board members, and Workforce Alliance representatives. Team members informed external partners of the new equipment and resources made possible through the grant, as well as gained guidance on the curriculum and student placement opportunities.
 - The team also communicated progress to the Butler Board of Trustees through monthly reports and to DOL through quarterly and annual reports.
- Most team members had all the resources and supports they needed for their work on the grant. They described that it was easy to get answers or support when needed. Some team members remarked that additional support, information, or resources would be helpful.

The Year 4 TAACCCT student survey provided insight into experiences of TAACCCT program participants, who had access to TAACCCT interventions. For example:

- Over 1/3 of respondents ($n = 37$, 34.6%) reported being employed in an industry relevant to their program of study at the time of the survey, in full-time ($n = 23$) and part-time ($n = 14$) positions. A similar number of respondents were working in an industry that was not relevant to their program of study ($n = 38$, 35.5%), in full-time ($n = 19$) and part-time ($n = 19$) positions.
- Before enrolling in the Butler IT training program, a little over 1/4 of respondents ($n = 31$, 29.0%) already had experience working in an industry relevant to their program of study.
- Reasons for enrolling in the Butler IT training program most often related to: Butler offering specific courses or programs the students wanted, personal interest in the programs, low cost/affordability, preparing for a career change or new field, and gaining knowledge and skills in the subject area.
- When starting the Butler IT training program, respondents' educational goals most frequently were to obtain a 2-year degree ($n = 65$, 60.7%), followed by eventually obtaining a 4-year degree ($n = 43$, 40.2%) and gaining enough training to obtain employment ($n = 36$, 33.6%).
- These TAACCCT students rated their overall satisfaction with the Butler IT program between "Satisfied" and "Very Satisfied" ($M = 4.06$, on the 5-point scale).
- Over 1/2 of respondents reported experiencing each of the Butler IT class formats, including: traditional face-to-face ($n = 75$, 70.1%), online ($n = 72$, 67.3%), and blended ($n = 62$, 57.9%). Most frequently, respondents selected having experienced all three formats ($n = 43$, 40.2%).
- Nineteen respondents (17.8%) reported having worked with the Butler IT academic success coach. Of five additional services available to Butler TAACCCT students, students most frequently

- reported using the job search assistance (job board) ($n = 21$, 19.6%), internship notifications ($n = 18$, 16.8%), and resume/interview preparation ($n = 15$, 14.0%).
- When rating 12 statements about Butler IT faculty/instructors, all mean ratings were on the positive side of the scale, and all except three of the mean ratings were over the “Agree” level. The statements with the highest ratings, with which over 3/4 of respondents agreed or strongly agreed, were that Butler IT faculty/instructors:
 - *Promote a respectful classroom environment.* ($n = 91$, 85.0%; $M = 4.43$)
 - *Allow time in class for discussion/interaction.* ($n = 90$, 84.1%; $M = 4.34$)
 - *Communicate clearly about important course topics.* ($n = 88$, 82.2%; $M = 4.27$)
 - *Are willing to meet with students outside of class (to answer questions, provide guidance).* ($n = 83$, 77.6%; $M = 4.26$)
 - *Make connections between course topics and their relevance to the industry.* ($n = 86$, 80.4%; $M = 4.23$)
 - *Are up-to-date on their knowledge of the industry.* ($n = 86$, 80.4%; $M = 4.19$)
 - *Are helpful in guiding me to understand course topics in ways that clarify my thinking.* ($n = 88$, 82.2%; $M = 4.18$)
 - The TAACCCT students also agreed that the Butler IT classes:
 - *Provide adequate space to facilitate learning.* ($n = 88$, 82.2%; $M = 4.35$)
 - *Provide adequate software to meet learning objectives.* ($n = 87$, 81.3%; $M = 4.33$)
 - *Arrange the space in a way that facilitates learning.* ($n = 84$, 78.5%; $M = 4.28$)
 - *Arrange the space in a way that facilitates interaction.* ($n = 84$, 78.5%; $M = 4.24$)
 - *Provide adequate hardware/equipment to meet learning objectives.* ($n = 84$, 78.5%; $M = 4.16$)
 - Eleven respondents (10.3%) reported that they interacted with industry employers that were not their own during the Butler IT program; seven were not yet employed in the industry, and four were. The most frequently reported employer interactions included: employers visiting class (e.g., to give a presentation), working for an employer at a regular part-time position, visiting employer organization(s) by themselves, interviewing with employers for internship or regular job positions, and working for an employer at an internship.

The Year 4 CTE control group student survey provided insight into experiences of participants of similar Butler CTE programs, without access to the TAACCCT interventions. CTE control group students shared:

- Most respondents were employed to some extent ($n = 6$, 85.7%), with three in part-time employment and one in full-time employment that was not related to their program of study, and two in full-time employment that was related to their program of study.
- Before enrolling in the Butler CTE training program, over 1/2 of respondents ($n = 4$, 57.1%) already had experience working in an industry related to their program of study.
- Reasons for enrolling in the Butler CTE training program related to gaining knowledge or education.
- When starting the Butler CTE program, respondents’ educational goals most frequently were to eventually obtain a 4-year degree ($n = 5$, 71.4%) and to obtain a 2-year degree ($n = 3$, 42.9%).
- This group rated their overall satisfaction with the Butler IT program between “Neutral” and “Satisfied” ($M = 3.83$, on the 5-point scale).
- The group agreed that Butler CTE faculty/instructors:
 - *Promote a respectful classroom environment.* ($M = 4.29$)
 - *Communicate clearly about important course topics.* ($M = 4.14$)
 - *Are helpful in guiding me to understand course topics in ways that clarify my thinking.* ($M = 4.14$)

- *Are up-to-date on their knowledge of the industry. (M = 4.14)*
 - *Allow time in class for discussion/interaction. (M = 4.14)*
 - *Are willing to meet with students outside of class (to answer questions, provide guidance). (M = 4.14)*
 - *Tell students about Butler services that are available to students. (M = 4.14)*
 - *Make connections between course topics and their relevance to the industry. (M = 4.00)*
- The group also agreed that Butler CTE classes:
 - *Provide adequate tools/equipment to meet learning objectives. (M = 4.14)*
 - *Provide adequate materials/resources to meet learning objectives. (M = 4.14)*
 - *Arrange the space in a way that facilitates interaction. (M = 4.14)*
- Over 3/4 of respondents reported experiencing a traditional face-to-face class format ($n = 6$, 85.7%), while fewer students reported experiencing blended ($n = 2$, 28.6%) and online ($n = 1$, 14.3%) formats. Over 1/2 of respondents reported experiencing only one format ($n = 4$, 57.1%).
- Most respondents did not interact with any industry employers while they were in the program ($n = 6$, 85.7%).

4. What factors affect and guide ongoing innovation and development?

Evidence in support of this evaluation question was collected through the Year 2 interviews, Year 2 faculty and administrator focus groups, as well as the Year 3 and Year 4 interviews. Data includes stakeholders' suggestions for the grant, which assisted in guiding grant implementation, as well as their thoughts on such topics as sustainability and lessons learned.

Through the Year 2 interviews, the team shared:

- Suggestions for improving the project, which included: improving team dynamics (e.g., increasing engagement, support, and accountability), refining grant processes/space (e.g., hiring a case manager, changing the IT Institute space), sustaining project efforts (e.g., IT Institute positions, the equipment), and improving clarity related to the grant's vision and requirements.
- Efforts being discussed or pursued in Year 2 for sustainability included:
 - Using the redesigned IT curriculum moving forward
 - Using equipment purchased through the grant in the redesigned classes moving forward
 - Including funds for equipment maintenance in strategic plans and budget allocations
 - Continuing to have industry review curriculum to ensure it meets industry's changing needs
 - Piloting the student tracking process outside of the IT programs, within CTE, to test scalability
 - Piloting other processes outside the IT Institute programs
 - Using the advisory board model in creating advisory boards outside of the IT programs
 - Using the Early IT Academy as a feeder program into the TAACCCT programs
 - Restructuring the student success system to help with retention throughout the college
 - Starting discussions with local companies/employers to gauge their willingness to support equipment upgrades
 - Seeking additional external funding to continue grant efforts as the grant ends
- Some team members were concerned that if more people did not engage in the new processes they would not be sustained after the grant ended. To continue the processes, they suggested that a Director and possibly one other full-time staff member would be necessary.
- Some team members also expressed concern that the equipment would cost a lot to maintain or upgrade, and this money would not be available after the grant ended. However, others mentioned that the equipment that faculty use will be maintained.

Follow-up focus groups with faculty and administrators in Year 2 resulted in identification of:

- Ideas for addressing key challenges.
- Questions about the grant.
- Steps that could be taken in Year 2 to move closer to sustainability. They identified six steps that could be taken.
 - One key step was to focus more on the TAACCCT logic model. Administrators identified the need to revisit the logic model and have TAACCCT grant leadership work through the logic model with faculty to identify what was and was not working in the logic model and revise it.
 - Another key piece for project success and sustainability was to have a reset with the team, especially lead faculty. Administrators suggested this reset could be timed to occur during the fall 2015 Professional Development Day and include a celebration of what had been accomplished so far as well as getting back to the main point of the grant.
 - Additional steps related to: curriculum mapping, with a focus on transferability; establishing and leveraging external partnerships, in conjunction with the Butler Foundation; modifying the grant leadership approach; and creating a plan to sustain the equipment.

Through the Year 3 interviews, team members provided the following evidence:

- If they were to start the grant over, they would do the following things differently:
 - Take additional time at the beginning of the project to select grant staff who fit better for the project rather than filling positions as quickly as possible, to avoid staff turnover and have better continuity throughout the grant
 - Ensure the grant was adequately staffed, including bringing in all grant staff sooner and replacing grant staff when they left
 - Make sure there was someone in charge of the grant, with visible support from upper-level administrators, to move things forward and hold team members accountable for meeting grant requirements and responsibilities
 - Clearly define the grant management structure and assign decision making authority to a specific person, so team members knew the chain of command
 - Have leadership understand, support, and direct the grant from the beginning, and strategically involve key players and provide explanations for courses of action
 - Provide more communication and clarity at the beginning of the grant about how it was going to work and what would be expected (e.g., development of the IT Institute, revision of curriculum), at the point when faculty were asked to describe their “dream lab” for the proposal
 - Gain total commitment from all key players (e.g., faculty, administrators) prior to submitting the grant application
 - Gain more clarity from DOL at the beginning of the grant related to spending guidelines, so the Butler team could move forward with the grant work (e.g., knowing they could spend money even though the government shut down a week after the grant was funded, knowing they could purchase equipment throughout the life of the grant instead of doing it all right away)
 - Utilize more resources, including talking to other colleges that had received TAACCCT grants previously to gain advice on operations and lessons learned
 - Increase visibility of the project at Butler and in the community, to ensure everyone on campus knew what the grant was, where it was housed, who was involved, and expected outcomes
 - Integrate the grant into Butler from Day 1, to encourage engagement and interaction with other departments, avoid isolation, and help Butler scale the grant holistically

- Have a clear, realistic plan for marketing and connecting with populations of interest (e.g., veterans)
 - Start work earlier with external partners and solidify agreements about roles and responsibilities
 - Partner with industry leaders/large companies (i.e., titans in the industry) to gain perspectives at a national level, drive student interest/acquisition, and add legitimacy to the program
 - Include additional university IT chairs and faculty on the advisory board to help with articulation agreements
 - Hire more full-time instructors, to meet student demand for classes
 - Scale down the grant to fewer programs
- On the other hand, if team members were to start the grant over, they would keep these things the same:
 - The entire approach (i.e., thinking big, thinking strategically)
 - Grant management process at Butler, including managing budget, tracking documents, and maintaining compliance
 - Grant roles, including academic coach, director/manager, administrative assistant, and instructional technologist, working as a cohesive unit and aware of others' roles
 - Regular meetings with the entire team to gain updates and identify action items
 - Leadership/guidance to keep the team moving forward
 - Flexibility of the team to adapt to changing circumstances (e.g., staff turnover)
 - Use of social media for communicating with students
 - The continual pushing of students to succeed
 - The funding
 - Advisory board approach
 - The Workforce Development contract
 - Career pathways
 - Green room
 - Opportunities to network across TAACCCT projects (e.g., TAACCCT On! Conference)
 - Access to SkillsCommons, where other TAACCCT projects' materials were posted
 - Initial DOL training in Chicago about budget and guidelines on how money could be spent
- Thoughts on sustainability of grant components at Butler, included:
 - Grant components that fit into Butler's strategic plan and budget would be sustained
 - Butler administrators were looking at other funding opportunities to support grant technology, including increasing student fees and pursuing other grants
 - Grant components that were expected to be retained and/or expanded included:
 - Grant staff positions, although they will be modified to have broader roles
 - The instructional technologist would be sustained as part of Butler Online as an online designer
 - The academic coach would assist with recruitment and advising for the entire CTE division
 - The curriculum developed and revised through the grant
 - The new hardware in the IT classrooms, with some equipment made available for use by other non-IT areas (e.g., green screen room, light board)
 - Trainings on the use of new equipment, which would continue to be developed and placed online, incorporating successes and lessons learned from faculty who have used it
 - Partnerships with employers, which also would expand to build more opportunities for student internships, employment, scholarships, and faculty resources
 - The advisory board, although it may focus more broadly on CTE

- The contract with Workforce Alliance, which would expand to other Butler divisions (not just IT) to assist more students in gaining employment
 - Current articulation agreements, and pursuit of additional agreements
- Grant components not expected to be sustained included:
 - Use of the term “IT Institute” (although the IT programs will continue)
 - Having one point of contact for the IT programs
 - Having one-on-one contact with IT students
 - Tracking student outcome data
 - Ongoing intentional review/revision of curriculum to fit industry needs
- Lessons learned believed to be key to sustainability:
 - It is important to make good purchasing decisions and incorporate long-range planning, especially for expensive equipment that needs continued licenses and upgrades.
 - Sustainability should be talked about throughout the project, not just at the end, so grant components are included in future budgets.
 - It would be beneficial to have an academic coach for all Butler degree areas, especially the big areas like IT.
 - Keeping programs current and based on industry needs is essential.
 - Communication, both internal and external to the college, should be targeted and intentional throughout the grant to increase clarity for team members, the college, and the community.
 - The initiative will only continue if administrators continue pushing it forward.
 - The role of faculty is critical, so their commitment/support needs to be gained before applying for a grant.
 - Administrators need to be very clear about expectations and responsibilities and more willing to exercise accountability.

Through the Year 4 interviews, participants provided the following evidence:

- Factors that affect and guide ongoing innovation included: budget, grant results (data/outcomes), employment needs and industry demands, and innovations in technology. They also shared that the structure of guided pathways would be used as a model for Butler.
- Experiences with the grant will influence future work related to: planning grants better (including creation of the grant team), making expectations about grant roles and requirements clear early in the project, creating guided pathways, including more people on the grant team so turnover does not affect the running of the project, and setting and focusing on clear goals.
- Thoughts on sustaining grant components included: maintaining partnerships such as with advisory board members and Workforce Alliance, staying current with technology, implementing guided career pathways, reviewing and modifying curriculum continuously, creating a Career Services office, and continuing student employment opportunities such as internships and job placements.
- Lessons learned frequently related to: the importance of team member involvement throughout the project, sharing clear expectations with and gaining buy-in from team members, establishing and communicating the structure of authority on the grant, and getting the right team in place. Further, team members’ experiences with the grant taught them the difficulty of meeting DOL requirements for obtaining data.
- External partners suggested that Butler should have gotten an earlier start on student tracking and industry engagement. They also stressed the importance of engaging industry experts in curriculum modifications with a focus on job preparation as well as keeping current with technology trends.

5. To what extent was there collaboration across instructional departments? What operational efficiencies were achieved through Butler's TAACCCT project?

Evidence in support of this evaluation question was collected through the Year 2 and Year 4 SGA updates, and the Year 3 and Year 4 interviews.

The Project Manager worked with the Registrar's Office and Financial Aid to gather, verify, and update participant data. The Instructional Technologist collaborated with the Online Department to develop workshops for Zoom teleconference software and Camtasia video editing software, and provided faculty an instructional platform to learn the capabilities/possibilities for uses in the classroom. Butler faculty planned to continue using this equipment to offer enhanced learning opportunities for students.

Evidence from the Year 3 interviews indicated that:

- The TAACCCT grant increased collaboration between the IT division and other offices across Butler, to some extent.
 - Collaboration increased between the IT programs and Butler's Academic Advising and Admissions areas related to student schedules as well as the development of an enrollment checklist and recruitment plan for TAACCCT.
 - There was collaboration with Butler's Early IT Academy staff because they shared a common goal with the TAACCCT grant (i.e., increasing enrollments in IT programs).
 - Collaboration increased due to the reorganization of grant staff positions to place them where they were more likely to be sustained (i.e., academic coach with CTE, instructional technologist with Butler Online).
 - Some non-IT instructional programs reached out to grant staff with interest in using grant equipment like the green room and Camtasia software (History, English, the Library) or showed potential students grant spaces/equipment on tours (Advising).
 - For the most part, TAACCCT was well-contained within the IT programs, and there had not been collaboration with other instructional departments or divisions in order to make transferring between divisions easier (i.e., shared core knowledge, skills, abilities in the curriculum).
 - Collaboration was with fewer people and IT programs than expected because some team members (i.e., faculty, grant staff) were no longer participating in the grant, but there was a higher level of collaboration between the remaining team members (e.g., close-knit team).
- The grant helped achieve operational efficiencies because it:
 - Allowed advanced purchase of hardware and software so it was in place prior to the start of class, rather than waiting to use student fees to purchase them after classes started and delaying instruction
 - Incorporated advanced, up-to-date hardware and software into classrooms to avoid instructional delays due to slow, poorly-functioning technology
 - Integrated grant positions into current Butler offices (e.g., CTE, Butler Online) so they became part of those offices' practices and were able to contribute their knowledge and skills to Butler more broadly than just for the TAACCCT grant
 - Relieved requests on the Advising office due to availability of an in-house academic coach who provided advising services for IT students
 - Created pages on the Butler website for TAACCCT information (i.e., one-stop shop)
 - Utilized Butler's existing application process for TAACCCT rather than creating a separate application process

Through the Year 4 interviews, team members provided the following evidence:

- Collaborations with other departments occurred because of the new technology (e.g., green screen room, light board), and the entire college was moving toward guided career pathways and learning from TAACCCT experiences (efficiency).
- Butler leveraged resources through receiving assistance from other Butler departments (advising, registrar, financial aid, etc.).
- Internal partners' greatest contributions included communicating and cooperating with grant staff to support grant activities, taking grant components to the next level, projecting a positive attitude, and verifying or providing student data.
- The project influenced the structure or operations of IT training at Butler by: introducing the concept of academic coach support, increasing the amount of online courses/presence, creating guided pathways, and providing new and upgraded technology.

Outcomes/Impacts Study Results

1. *What is the difference in persistence, completion, and employment outcomes among students who utilize program services and those in other benchmarked technical education programs at Butler?*

The Butler TAACCCT team tracked data related to the DOL metrics and demographics for both the TAACCCT and control student groups. Butler provided these data files to OEIE in August 2017, to allow inclusion of the analysis in this final evaluation report. OEIE analyzed each data file (TAACCCT and control) separately, and then conducted statistical comparisons between the groups on the DOL metrics. The results of these analyses appear below. It is important to note that Butler continued collecting and verifying data for the DOL metrics after sharing the data file with OEIE. Therefore, the numbers presented in this final evaluation report do not represent Butler's "final" data, so they may differ from numbers in Butler's final performance report to DOL.

TAACCCT Group Student Profile

The TAACCCT group's participant outcomes (i.e., DOL metrics) and population characteristics are presented below, and Appendix 6 contains an infographic presenting key data points. Highlights include:

- The TAACCCT group included 657 unique students. Participants' enrollment by grant year was: 138 students (21.0%) enrolled in Year 1 (fall 2014), 439 students (66.8%) enrolled in Year 2 (spring 2015 to fall 2015), and 80 students (12.2%) enrolled in Year 3 (spring 2016).
- A total of 151 students (23.0%) completed one or more of the TAACCCT programs (i.e., credentials), with 73 of those students being incumbent workers (i.e., employed at enrollment).
- Of the 151 students who completed a TAACCCT program, students most frequently:
 - Completed one program ($n = 75$ students), followed by two ($n = 38$), three ($n = 22$), four ($n = 14$), or five ($n = 2$) programs.
 - Completed one or more degree programs ($n = 109$ students) and/or certificates designed to be completed in less than one year ($n = 108$). [Please note these frequencies do not add to 151 (the total number of students completing a TAACCCT program) because some students completed multiple types of TAACCCT programs (e.g., a degree and a certificate).] Students completed a degree credential type ($n = 43$), a certificate credential type ($n = 42$), or both ($n = 66$) credential types.
- Five hundred seventy-five students ($n = 575$, 87.5%) completed a total of 7,726 credit hours. Eighty-two students ($n = 82$, 12.5%) did not complete any credit hours.

- For all TAACCCT participants, the number of credits hours completed ranged between 0 and 48 credit hours, with an average of 12 credit hours completed, a median of 9 credit hours completed, and a mode of 3 credit hours completed.
- Among the group of 575 students who completed credit hours, the number of credit hours completed ranged between 3 and 48 credit hours, with an average of 13.4 credit hours completed, a median of 9 credit hours completed, and a mode of 3 credit hours completed.
- Of the 506 students who did not complete a TAACCCT program, 148 students (29.2%) were retained in a TAACCCT program and five (1.0%) were retained at Butler in a non-TAACCCT program, as of March 31, 2017.
- Of 64 TAACCCT students who completed TAACCCT programs and were not incumbent workers:
 - Fifteen students entered employment in the quarter after exiting Butler. Eight students were retained in employment in the two quarters following employment.
 - Twenty-nine students entered another education program.
 - The remaining 20 students did not enter employment or another education program.
- Of the 225 TAACCCT students who were incumbent workers, 121 students (53.8%) received wage increases after enrolling in the TAACCCT program. The hourly wage increases ranged from \$0.05 to \$26.45, with an average hourly wage increase of \$3.68.
 - Upon enrollment, these 121 TAACCCT students who were incumbent workers had hourly wages that ranged between \$5.23 and \$48.27, with an average hourly wage of \$14.13. After the wage increases, these students' hourly wages ranged between \$5.32 and \$49.52, with an average hourly wage of \$17.84.
 - The students who did not receive a wage increase after enrolling in the program had an hourly wage ranging between \$2.13 (plus tips) and \$53.85, with an average hourly wage of \$13.72.
- Overall, the 225 incumbent workers' hourly wages at enrollment ranged from \$2.13 (plus tips) to \$53.85, with an average hourly wage of \$13.96. As of fall 2017, all the incumbent workers' hourly wages ranged from \$2.13 (plus tips) to \$53.85, with an average hourly wage of \$16.12. For this group of 225 incumbent workers, a pair-samples *t*-test comparing hourly wages at enrollment ($M = \$13.96$, $SD = \$8.94$) to current hourly wages ($M = \$16.12$, $SD = \$9.75$) indicated the wage increase for the group was statistically significant; $t(171) = -7.82$, $p < .001$.

Butler TAACCCT Group Targeted Outcome Measures		
Targeted Outcome Measures	Goal	Achieved
1 – Total Number of Unique Participants Served	420	657
2 – Total Number of Participants Who Have Completed a Grant Program of Study	195	151
3 – Total Number of Participants Still Retained in Grant Program of Study (non-completers)	410	148
4 – Total Number of Participants Completing Credit Hours	195	575
5 – Total Number of Participants Earning Credentials	187	151
6 – Total Number of Participants Pursuing Further Education After Program of Study Completion	110	29
7 – Total Number of Participants Employed After Program of Study Completion (non-incumbent)	140	15
8 – Total Number of Participants Retained in Employment After Program of Study Completion (non-incumbent)	134	8
9 – Total Number of Those Participants Employed at Enrollment Who Receive a Wage Increase Post-Enrollment (incumbent)	60	121

The TAACCCT students completed a total of 283 credentials, including 112 degrees and 171 certificates designed to be completed in less than one year. Most frequently, students completed the BCC MCSA Windows 8 (6 hour) certificate ($n = 53$), the BCC MCSA Server 2012 (9 hour) certificate ($n = 29$), Networking 1 (12 hour) certificate ($n = 26$), Cyber Security A.A.S. ($n = 25$), and Digital Media A.A.S. ($n = 23$).

Butler TAACCCT Program Completion Summary	
Program Completed	Count
<i>Degrees</i>	<i>112</i>
Cyber Security A.A.S.	25
Digital Media A.A.S.	23
Interactive & 3D Technologies A.A.S.	16
Internetworking Management A.A.S.	16
Software Development A.A.S.	12
Windows Administration A.A.S.	9
Database Administration A.A.S.	7
Web Development A.A.S.	4
<i>Certificates</i>	<i>171</i>
BCC MCSA Windows 8 (6 hour)	53
BCC MCSA Server 2012 (9 hour)	29
Networking 1 (12 hour)	26
3D Graphic Specialist (9 hour)	14
Game Designer (15 hour)	10
Digital Photography (12 hour)	9
Basic Programming (9 hour)	8
Cyber Security (30 hour)	8
BCC MCSA SQL Server (9 hour)	6
BCC MCSE Server Infrastructure (15 hour)	3
Digital Media Specialist (33 hour)	3
Game Programming (15 hour)	2
Advanced Programming (15 hour)	-
Signage Specialist (9 hour)	-
Web Designer (15 hour)	-
Web Developer (15 hour)	-
Total Programs Completed	283

Note. One hundred fifty-one students completed a total of 283 programs. Students completed one program ($n = 75$ students), followed by two ($n = 38$), three ($n = 22$), four ($n = 14$), or five ($n = 2$) programs.

A demographic profile of the TAACCCT students is presented in the following tables. The majority of TAACCCT students were: Male (74.9%), White (75.5%), and/or Not Hispanic/Latino (90.9%). There was a fairly even split of students enrolled full-time (52.2%) and part-time (47.8%), and over half of students were not employed at enrollment (i.e., not incumbent workers) (55.3%).

TAACCCT Student Demographics (N = 657)			
Demographic Variable	Options	Frequency	Percent
Gender	Male	492	74.9%
	Female	165	25.1%

TAACCCT Student Demographics (N = 657)				
Demographic Variable	Options	Frequency	Percent	
Race	American Indian or Alaskan Native	10	1.5%	
	Asian	57	8.7%	
	Black or African American	37	5.6%	
	Hawaiian Native or Pacific Islander	-	-	
	White	496	75.5%	
	More Than One Race	37	5.6%	
	No self-disclosure	20	3.0%	
Hispanic/Latino Ethnicity	Yes	56	8.5%	
	No	597	90.9%	
	No self-disclosure	4	0.6%	
School Status	Full-time	343	52.2%	
	Part-time	314	47.8%	
	Neither/Non-credit	-	-	
Incumbent Worker Status	Yes	225	34.2%	
	No	363	55.3%	
	No self-disclosure	69	10.5%	
Eligible Veteran Status	Yes, Eligible Veteran	58	8.8%	
	No	599	91.2%	
	Missing	-	-	
Individual with a Disability	Yes	23	3.5%	
	No	542	82.5%	
	No self-disclosure	92	14.0%	
Pell-grant Eligible	Yes	206	31.4%	
	No	451	68.6%	
	No self-disclosure	-	-	
TAA Eligible	Yes	28	4.3%	
	No	629	95.7%	
	Missing (not in college records)	-	-	

At enrollment, the ages of TAACCCT students ranged from 16 to 64 years, with an average age of 26.4 years. The current ages of TAACCCT students (as of September 30, 2017) range between 19 and 67, with an average age of 28.9 years.

Butler TAACCCT Student Age Summary		
Statistic	Value Based on Age at Enrollment	Value Based on Current Age (as of September 30, 2017)
Minimum	16	19
Maximum	64	67
Average	26.4	28.9
Median	23	25
Mode	19	22

Control Group Student Profile

The control group's participant outcomes (i.e., DOL metrics) and population characteristics are presented below. Highlights include:

- The control group included 88 unique students. Students' enrollment by grant year was: 23 students (26.1%) enrolled in Year 1 (fall 2014), 50 students (56.8%) enrolled in Year 2 (spring 2015 to fall 2015), and 15 students (17.0%) enrolled in Year 3 (spring 2016).
- Four students (4.5%) completed a program (i.e., credential). All of these students were NOT incumbent workers.
- Seventy-five students (85.2%) completed a total of 3,209 credit hours. Thirteen students (14.8%) did not complete any credit hours.
 - For the entire control group, the number of credit hours completed ranged between 0 and 136 credit hours, with an average of 36.5 credit hours completed, a median of 27 credit hours completed, and a mode of 0 credit hours completed.
 - Among the 75 control group students who completed credit hours, the number of credit hours completed ranged between 1 and 136 credit hours, with an average of 42.8 credit hours completed, a median of 42 credit hours completed, and a mode of 6 credit hours completed.
- Fourteen control students who had not yet completed a control program were still enrolled in Butler as of the fall 2017 semester.
 - Eight students were retained in control programs of study.
 - Six students were retained in non-control Butler programs of study.
- Of the four non-incumbent workers who completed a control program (Welding Certificate):
 - One student entered employment in the quarter after exiting Butler and was retained in employment in the two quarters following employment.
 - One student entered another education program. This student was still enrolled in Butler as of the fall 2017 semester.
 - The other two students did not enter employment or another education program.
- Of the 19 control group students who were incumbent workers, 10 students (52.6%) received wage increases after enrolling in the program. The hourly wage increases ranged from \$0.22 to \$12.48, with an average hourly wage increase of \$2.76.
 - Upon enrollment, the 10 control group students who were incumbent workers and received wage increases had hourly wages that ranged between \$7.25 and \$30.74, with an average hourly wage of \$11.53. After their wage increases, these 10 students' hourly wages ranged between \$7.80 and \$31.50, with an average hourly wage of \$14.29.
 - The nine control group students who were incumbent workers and did not receive a wage increase after enrolling in the program had an hourly wage ranging between \$8.00 and \$16.68, with an average hourly wage of \$10.96.
 - Overall, the 19 incumbent workers' hourly wages at enrollment ranged from \$7.25 to \$30.74, with an average hourly wage of \$11.26. As of fall 2017, all the incumbent workers' hourly wages ranged from \$7.80 to \$31.50, with an average hourly wage of \$12.71. For this group of 19 incumbent workers, a pair-samples *t*-test comparing hourly wages at enrollment ($M = \$11.26$, $SD = \$5.52$) to current hourly wages ($M = \$12.71$, $SD = \$5.82$) indicated the wage increase for the group was statistically significant; $t(18) = -2.14$, $p < .05$.

Butler CTE Control Group Targeted Outcome Measures	
Targeted Outcome Measures	Frequency
1 – Total Number of Unique Participants Served	88
2 – Total Number of Participants Who Have Completed a Control Program of Study	4
3 – Total Number of Participants Still Retained in Control Program of Study (non-completers)	8
4 – Total Number of Participants Completing Credit Hours	75
5 – Total Number of Participants Earning Credentials	4
6 – Total Number of Participants Pursuing Further Education After Program of Study Completion	1
7 – Total Number of Participants Employed After Program of Study Completion (non-incumbent)	1
8 – Total Number of Participants Retained in Employment After Program of Study Completion (non-incumbent)	1
9 – Total Number of Those Participants Employed at Enrollment Who Receive a Wage Increase Post-Enrollment (incumbent)	10

The control group students completed a total of 16 credentials. Four students each completed one Butler certificate and three additional industry-recognized credentials. All of these students completed Butler's Welding Certificate ($n = 4$), a certificate designed to be completed in less than a year. The additional industry-recognized credentials completed by each of these students were: Gas Metal Arc Welding (GMAW), Shielded Metal Arc Welding (SMAW), and Gas Tungsten Arc Welding (GTAW). Therefore, this group completed a total of 16 industry-recognized credentials.

Butler CTE Control Group Program Completion Summary	
Program Completed	Count
Degrees	-
Engineering Graphics Technology A.A.S.	-
Composite Engineering Technology A.A.S.	-
Marketing and Management A.S.	-
Marketing and Management A.A.S.	-
Welding A.A.S.	-
Certificates	4
Engineering Graphics Technology Certificate (32 credits)	-
Welding Certificate (36 credits)	4
Total Programs Completed	4

Note. Four student completed one Butler certificate each ($n = 4$). Each student also completed three additional industry-recognized credentials.

A demographic profile for CTE control group students is presented in the following tables. The majority of CTE control group students were: Male (68.2%), White (70.5%), and/or Not Hispanic/Latino (84.1%). Most were enrolled part-time (73.9%) and not employed at enrollment (i.e., not incumbent workers) (73.9%).

Butler CTE Control Group Student Demographics ($N = 88$)			
Demographic Variable	Options	Frequency	Percent
Gender	Male	60	68.2%
	Female	28	31.8%

Butler CTE Control Group Student Demographics (N = 88)			
Demographic Variable	Options	Frequency	Percent
Race	American Indian or Alaskan Native	2	2.3%
	Asian	7	8.0%
	Black or African American	11	12.5%
	Hawaiian Native or Pacific Islander	1	1.1%
	White	62	70.5%
	More Than One Race	2	2.3%
	No self-disclosure	3	3.4%
Hispanic/Latino Ethnicity	Yes	14	15.9%
	No	74	84.1%
	No self-disclosure	-	-
School Status	Full-time	22	25.0%
	Part-time	65	73.9%
	Neither/Non-credit	1	1.1%
Incumbent Worker Status	Yes	19	21.6%
	No	65	73.9%
	No self-disclosure/Missing	4	4.5%
Eligible Veteran Status	Yes, Eligible Veteran	2	2.3%
	No	84	95.5%
	Missing	2	2.3%
Individual with a Disability	Yes	7	8.0%
	No	79	89.8%
	No self-disclosure	2	2.3%
Pell-grant Eligible	Yes	14	15.9%
	No	72	81.8%
	No self-disclosure	2	2.3%
TAA Eligible	Yes	-	-
	No	-	-
	Missing (not in college records)	88	100.0%

At enrollment, the ages of CTE control group students ranged from 17 to 48 years, with an average age of 20 years. The current ages of CTE control group students (as of September 30, 2017) ranged between 19 and 51, with an average age of 22.3 years.

Butler CTE Control Group Student Age Summary		
Statistic	Value Based on Age at Enrollment	Value Based on Current Age (as of September 30, 2017)
Minimum	17	19
Maximum	48	51
Average	20	22.3
Median	19	21
Mode	18	20

TAACCCT and Control Group Comparison

DOL Metrics

The evaluation team completed eight Pearson chi-square analyses to statistically compare the DOL metrics for the TAACCCT and control groups. The results of the analyses are presented in the table below. The comparisons revealed three statistically significant differences. Higher proportions of TAACCCT students, as compared to control students: completed a program of study, were retained in a program of study, and earned credentials (all $p < .001$). On the other hand, similar proportions of TAACCCT and control students: completed credit hours, pursued further education after completing their program of study, were employed after completing their program of study, were retained in employment, and earned a wage increase following enrollment if they had already been employed at enrollment.

Butler TAACCCT vs Control Group Targeted Outcome Measures			
Targeted Outcome Measures	TAACCCT	Control	Statistic
1 – Total Number of Unique Participants Served	657	88	[no comparison possible]
2 – Total Number of Participants Who Have Completed a Grant Program of Study	151 (of 657) (23.0%)	4 (of 88) (4.5%)	$\chi^2 (1, N = 745) = 16.01$ $p < .001$ Cramer's $V = .15$
3 – Total Number of Participants Still Retained in Grant Program of Study (non-completers only)	148 (of 506) (29.2%)	8 (of 84) (9.5%)	$\chi^2 (1, N = 590) = 14.41$ $p < .001$ Cramer's $V = .16$
4 – Total Number of Participants Completing Credit Hours	575 (of 657) (87.5%)	75 (of 88) (85.2%)	$\chi^2 (1, N = 745) = 0.37$ $p = .545$ Cramer's $V = .02$
5 – Total Number of Participants Earning Credentials	151 (of 657) (23.0%)	4 (of 88) (4.5%)	$\chi^2 (1, N = 745) = 16.01$ $p < .001$ Cramer's $V = .15$
6 – Total Number of Participants Pursuing Further Education After Program of Study Completion	29 (of 151) (19.2%)	1 (of 4) (25.0%)	$\chi^2 (1, N = 155) = 0.08$ $p = .772$ Cramer's $V = .02$
7 – Total Number of Participants Employed After Program of Study Completion (non-incumbent only)	15 (of 64) (23.4%)	1 (of 4) (25.0%)	$\chi^2 (1, N = 68) = 0.01$ $p = .943$ Cramer's $V = .01$
8 – Total Number of Participants Retained in Employment After Program of Study Completion (non-incumbent only)	8 (of 15) (53.3%)	1 (of 1) (100%)	$\chi^2 (1, N = 16) = 0.83$ $p = .362$ Cramer's $V = .23$
9 – Total Number of Those Participants Employed at Enrollment Who Receive a Wage Increase Post-Enrollment (incumbent only)	121 (of 225) (53.8%)	10 (of 19) (52.6%)	$\chi^2 (1, N = 244) = 0.01$ $p = .923$ Cramer's $V = .01$
Note. The percentages for each metric are based on different total values, which each representing the total possible number for each metric (e.g., whether based on incumbent only, completers only, etc.).			

The evaluation team also compared hourly wage data that were available for the groups at enrollment and fall 2017. The analyses revealed a significant main effect for the hourly wage ($F (1, 189) = 17.60, p < .001$). Specifically, hourly wages increased from enrollment ($M = 13.69, SD = 8.69$) to fall 2017 ($M = 15.78, SD = 9.47$), considering all students combined (from both groups). However, the TAACCCT and control

groups did not differ in terms of hourly wage ($F(1, 189) = 2.02, p = .157$) or its change from enrollment to fall 2017 ($F(1, 189) = 0.67, p = .414$).

Survey Responses

During spring 2017, the evaluation team collected survey data from the TAACCCT students as well as CTE students in the control group. The two student surveys contained a selection of 43 equivalent items to allow comparison between the TAACCCT and control students' feedback on their experiences in their programs. Differences in the wording of the items between the two surveys typically related to the use of "IT" vs "CTE" when referring to the programs. The equivalent items included: 35 scaled items, 5 multiple-choice items where only 1 response option could be selected, and 3 multiple-choice items where multiple response options could be selected ("select all that apply") and which contained a total of 17 response options for comparison. The selection of equivalent items allowed 57 comparison analyses.

The evaluation team compared the two student groups' responses to the multiple-choice items using chi-square tests. Chi-square tests allowed for evaluating whether these two groups' categorical (i.e. multiple choice) data showed similar or different patterns, or distributions, of responses. The evaluation team compared the two student groups' responses to scaled items using Mann-Whitney U tests. The Mann-Whitney U is a nonparametric test (i.e., does not require a normal distribution, works with small samples) for evaluating whether two independent groups' responses to ordinal data are similar or different. Statistical significance was identified with p -values less than .05.

- Only one statistically significant difference was identified. Students in the TAACCCT group were more likely to report experiencing the online class format, as compared to students in the control group ($\chi^2(1, N = 108) = 9.71, p = .002$).
- Two additional comparisons approached significance, in the direction of more TAACCCT students reporting that 1) they experienced a blended class format ($\chi^2(1, N = 108) = 2.92, p = .088$) and 2) their educational or career goals changed while in the program ($\chi^2(1, N = 114) = 3.04, p = .081$).
- Although very few comparisons approached or achieved statistical significance, 22 of the 35 comparisons on the scaled items were in the expected or desired direction.

2. *To what extent does the program use career pathways, academic instruction, and student support services to improve student outcomes?*

Evidence in support of this evaluation question was collected through the Year 3 and Year 4 interviews as well as the Year 4 TAACCCT student survey.

Through the Year 3 interviews, team members shared:

- Overall outcomes and impacts of the TAACCCT grant, which were frequently perceived to benefit students, faculty, Butler, and/or partners, included:
 - Updated Butler's IT curriculum, aligned programs to industry needs
 - Upgraded Butler's IT equipment (e.g., green screen, light board) and software (e.g., Camtasia)
 - Improved Butler's IT courses (e.g., Quality Matters, more interactive, online)
 - Created a strong IT advisory board and new industry partnerships
 - Developed training/professional development opportunities for faculty
 - Created career pathways that outlined steps to specific careers and relevant Butler contacts
 - Increased faculty's excitement/enthusiasm for teaching the IT programs
 - Increased enrollments at Butler, in IT programs and in general (e.g., due to providing tours of

- grant spaces)
 - Strengthened students' skill sets needed for employment in industry
 - Increased student opportunities for scholarships, internships, and employment
 - Students gained scholarships, internships, and employment
 - Students earned short-term certificates of completion
 - Strengthened Butler's relationship with Workforce Alliance
 - Refined Butler's approach of applying for and managing large grants
- Unexpected outcomes included:
 - Purchased a large amount of new equipment
 - Learned a lot (e.g., new equipment, career pathways, program content)
 - Provided many tours of the IT spaces and equipment
 - Generated interest outside the IT programs for the new equipment (e.g., green screen)
 - Collaborated with many people who were interested in technology
 - Experienced a high amount of grant staff turnover (two directors, administrative assistant, instructional technologist)
 - Changed the vision for the project due to turnover of Butler administration (Dean of CTE, Vice President of Academics)
 - Was difficult getting faculty to contribute to the project and participate in training
 - Approached major grant development differently at Butler (i.e., ensured people understood the scope, significance, and level of commitment involved before applying; only applied for grants that strategically fit Butler's mission)
- The grant enhanced Butler's prestige:
 - Partnerships were strengthened with Workforce Alliance and industry employers, with those entities increasing the visibility of Butler's IT programs in the community and recommending potential students to Butler.
 - The upgraded equipment and curriculum made Butler look better to students and industry partners.
 - The IT programs were already strong, but TAACCCT pushed them further and faster than otherwise would have happened.
 - Butler was in the newspapers about receiving millions of dollars in a grant for the IT programs.
 - The Kansas Board of Regents was aware Butler received the grant.
- Other team members perceived the grant had not yet enhanced Butler's prestige. However, they shared that the grant laid the foundation to help with enhancing prestige, although more work was needed to increase the visibility of the grant and IT programs in the community. This may be easier once the grant shows evidence of impacts for students (e.g., gaining employment, achieving a higher level of training, earning promotions). It also was noted that fulfilling TAACCCT grant requirements will help Butler receive additional grants in the future, which also will contribute to the college's prestige.
- The grant improved Butler's relationship with area employers or enhanced Butler's visibility in workforce development:
 - Although some area employers were already involved with Butler prior to TAACCCT, additional employers were involved due to TAACCCT.
 - Relationships improved due to making employers and Workforce Alliance aware of the up-to-date equipment available at Butler and requesting their feedback on the curriculum. The TAACCCT grant opened the door to these conversations.
 - Workforce Alliance and employer partner representatives participated in the TAACCCT advisory board. Employer partners shared job openings, internships, and scholarships.
 - The Workforce Alliance directed potential students to Butler IT programs due to the

- availability of short-term certificates and shared job openings available only through Workforce Alliance with TAACCCT students.
- Grant staff collaborated with another organization whose goal was to keep non-aviation jobs (e.g., healthcare, IT, agriculture) in Wichita. They attended meetings to share what Butler did related to the TAACCCT grant and IT programs and made connections with local companies.
 - Some team members shared that the improved relationships and visibility were at a smaller scale than desired, with limited involvement of partners and of IT programs. Faculty who were more engaged in the grant built stronger partnerships and achieved higher visibility for their programs, compared to those programs whose faculty did not engage with the grant.
 - The grant made Butler more competitive with other higher education institutions in the local area:
 - There was better awareness that Butler offered IT programs.
 - The programs were already strong, but TAACCCT helped make them better by funding upgrades to the equipment and curriculum.
 - Butler was on top of their game with technology, both hardware and software.
 - Students transferred from other institutions because they felt Butler had a stronger, more rigorous program.
 - Four-year institutions were aware that Butler had strong, rigorous IT programs so were more willing to develop articulation agreements for those programs.
 - The grant allowed opportunities for faculty to gain professional development (e.g., related to the new technology purchased through the grant).
 - Training students on new technology made them more competitive for gaining employment than other schools' graduates.
 - There was increased engagement in Butler's online IT courses, which were high quality and interactive due to the TAACCCT grant requiring Quality Matters.
 - Some team members thought the TAACCCT grant had not yet made Butler more competitive with other institutions of higher education in the area.

Through the Year 4 interviews, participants shared the following evidence:

- Overall project outcomes and impacts included: expanded relationships with workforce/industry, enhanced classrooms (technology, software, classroom redesign), guided pathways provided clearer path and/or led to student completion (degrees, certificates), provided opportunities for faculty to gain professional development and restructure teaching, improved/expanded student tracking process (to demonstrate grant outcomes), provided industry with access to a broader pool of recruiting, and students gained employment.
- Project outcomes and impacts specifically related to increasing Butler's capacity to meet industry and student educational needs were: provided career pathways/credentials for student training, enhanced/provided programs that met industry needs (3D, networking, cyber security), and provided current/relevant equipment to support curriculum.
- Project outcomes and impacts related to improving Butler's relationships with regional employers and/or workforce development were: increased awareness of Butler IT programs by industry/workforce, provided students with knowledge of job opportunities (e.g., job posters) and jobs/internships, and provided students with skills and knowledge to meet industry needs.
- Project outcomes and impacts by stakeholder group were:
 - For Butler
 - Enhanced classrooms and curriculum
 - Provided new, relevant equipment/technology to support the updated curriculum
 - Increased the amount of online courses

- Provided career pathways and credentials
- Created guided pathways, providing a clearer path to program completion
- Introduced/tested the academic coach concept
- Provided opportunities for faculty to gain professional development and restructure teaching
- Improved/expanded the student tracking process
- Expanded relationships with workforce/industry partners
- Increased collaboration across offices/units
- Encouraged a move toward guided pathways for the entire college
- For industry partners
 - Increased awareness of Butler IT programs
 - Expanded their relationship with Butler
 - Influenced a change in curriculum to meet industry needs
 - Gained access to a broader pool for recruiting
- For students/program participants
 - Gained knowledge/skills to meet industry needs
 - Completed programs
 - Gained knowledge of job opportunities/internships
 - Gained employment

Evidence from the Year 4 TAACCCT student survey included:

- Respondents reported completing 43 degrees and 59 certificates.
- Less than 1/3 of respondents ($n = 33, 30.8\%$) indicated that their educational and/or career goals changed while they were in the Butler IT program, most frequently in the following ways: they learned/recognized their strengths and interests, they decided to continue education after Butler, they changed their program/field of study, and they enhanced their awareness of or interest in specific careers. Some students found their experience with the Butler IT program helped them with advancement or flexibility in their current employment, and some students decided to stop with an Associate's degree instead of continue with their education after Butler.
- The group agreed that the program increased their technical knowledge ($n = 90, 84.1\%$; $M = 4.36$) and technical skills ($n = 89, 83.2\%$; $M = 4.36$).
- Of the 19 students who reported having worked with the Butler IT academic success coach, over 1/2 ($n = 10, 52.6\%$) thought they would not have had as much success if they had not worked with the coach.
- Students who used student services reported ways four of the services helped them:
 - The job search assistance (job board) provided information on job openings, shared what employers were looking for education-wise, and helped students find a job or internship.
 - The resume/interview preparation polished students' resumes, showed students how to act in an interview, and helped students gain employment.
 - Tutoring helped students on assignments and understanding course content.
 - Internship notifications resulted in students' increased awareness of opportunities available, students applied for internships, and students gained knowledge about specific opportunities.
- Eleven respondents (10.3%) reported they interacted with industry employers that were not their own during the Butler IT program; seven were not yet employed in the industry, and four were. This group believed having exposure to employers during the Butler IT program was between "Very Helpful" and "Extremely Helpful" ($M = 4.27$, on a 5-point scale).

- Impacts of interacting with industry employers were building networks, gaining motivation, and learning about the industry.
- When sharing impacts of enrolling in the Butler IT program, students most frequently shared positive impacts ($n = 44$). For example, they: learned new knowledge and skills; gained confidence, motivation, and/or focus; obtained employment; gained networking connections; received a promotion at work; continued to work on a Bachelor's degree; completed an Associate's degree; and completed a Bachelor's degree. Two students shared the negative impact of wasted time.

3. *To what extent does the program efficiently leverage resources to accomplish the stated program goals?*

Evidence in support of this evaluation question was collected through the Year 4 interviews.

Through the Year 4 interviews, participants shared that Butler leveraged internal resources for the grant through receiving assistance from other Butler offices/units (advising, registrar, financial aid, etc.). For example, Butler leveraged staff time and expertise to install and maintain new equipment purchased through the grant. Butler leveraged external resources for the grant through developing or modifying curriculum in collaboration with industry partners, and providing job opportunities and internships through industry partners.

Evaluation Observations

The evaluation team offers the following observations for Butler's consideration in wrapping up the TAACCCT grant and moving forward with future projects. These comments are based on ideas shared by Butler TAACCCT stakeholders through the data collections as well as the evaluation team's experience working on TAACCCT and other grants.

Successes/Best Practices

- Team members shared the following components they perceived to be strengths of the grant:
 - Use of current, up-to-date technology (hardware/software) that was also used in industry
 - Engagement of advisory board in curriculum reviews/revisions
 - Updated, relevant curriculum content consistent with industry needs (e.g., labs, hands-on activities)
 - A dedicated academic coach in the building who worked well with students and faculty and provided students with constant contact throughout the program and helped with resumes and mock interviews
 - Identification of additional job openings in the local area (e.g., through research by academic coach, partnering with Workforce Alliance)
 - Connections with industry partners for internship, employment, and scholarship opportunities
 - Instructional approach that encouraged students to problem solve (e.g., Google it)
 - Latticed credentials and certificates of completion
 - Career pathways program sheets
 - Created new partnerships with industry representatives
 - Secured new articulation agreements with higher education institutions
 - Developed good working relationships and collaboration with Butler staff and faculty to meet

- grant requirements
- Tracked students/measured student success, which was scaled through a pilot in CTE (outside of IT)
- Established a relationship with Workforce Development to assist with tracking student employment data
- TAACCCT students shared that:
 - The IT program is interesting, provides both content and experiences that are relevant to the current industry, offers course options that meet students' learning needs and goals as well as their scheduling needs, and is well worth the time required.
 - Aspects of the program they liked best included: the faculty/instructors, equipment/software/tools/resources, the class structure, subject matter, and the learning that took place.
- The grant team was responsive to challenges identified through evaluation data collections. They discussed the challenges at team meetings, requested follow-up data collections to learn more, and revised the team approach/structure in Year 3.
- The grant demonstrated outcomes and impacts that benefitted students, external partners, and the college, with many of these providing benefits to multiple groups.
 - The most noteworthy outcome for students was gaining employment. Through the grant, students enhanced skill sets to meet industry needs. In addition, students were provided with: knowledge of job opportunities and internships as well as access to relevant equipment and curriculum to meet educational needs.
 - Many of the impacts and outcomes for the college also had impacts on students, such as enhanced classrooms through technology, software, and classroom redesign to make students more employable by increasing their knowledge and skills, and guided pathways that provided a clearer path, which led to student completion of degrees and certificates.

Challenges

- Team members reported the following challenges related to the grant:
 - Early on, there were problems with team dynamics, progress delays/losses, lack of clarity related to the grant, issues with facilities and equipment, and communication.
 - The government shut down right after the grant was funded, which caused delays at the start of the grant.
 - Turnover was experienced with many Butler team members, both at the grant staff and administrator levels.
 - There was unclear or inconsistent leadership on the grant, including lack of accountability for team members meeting expectations.
 - There was pushback from some faculty who were not willing to collaborate on the grant.
 - The partnership with Workforce Alliance occurred later in the project than expected.
 - It was difficult to obtain student data on the DOL metrics, especially the employment metrics.
 - Job placement rates were lower than expected for program completers.
 - The DOL reporting requirements were unclear and open to interpretation.
- Students shared that Butler needed to do the following things to make the IT program more successful: improving the availability and/or quality of resources, increasing course availability or flexibility, and including more relevant, real-world content.

Strengths of the Evaluation Methods and Data

- The evaluation team collected stakeholder feedback throughout the implementation of the grant intervention (in Years 2 through 4), gaining formative feedback that the Butler TAACCCT team could use for project planning and improvement as well as evidence of outcomes and impacts.
- Many stakeholder voices were represented among the data collections, including Butler TAACCCT staff and administrators; Butler high-level administrators, faculty, and other staff members; external partners (advisory board members, employers, workforce representatives); and students.
- Each year, the evaluation collected feedback from Butler internal grant team members who played key roles in grant implementation in that project year, through face-to-face interviews. These interviews gained formative feedback on the grant approach and evidence of impacts for the college and other stakeholders.
- Participation in evaluation activities by Butler's internal grant team members (TAACCCT grant staff and administrators, high-level administrators, faculty, and other office staff) was consistently very high, among the individuals who were invited to participate.
- The evaluation also collected feedback from current and former TAACCCT students through a survey each year, which provided an opportunity to hear directly from the students about their experiences with and impacts of the grant.
- The comparison study for the evaluation involved statistical testing to compare TAACCCT and control students on the key DOL academic and employment metrics.
- During Year 4, the evaluation team collected feedback from control group students through a survey, which allowed for a comparison of the TAACCCT and control students beyond just the DOL metrics collected by Butler TAACCCT staff.

Limitations of the Evaluation Methods and Data

- Although the evaluation collected feedback from grant staff/administrators and students each year of grant implementation, feedback was collected less consistently from external partners. External partner data collections included: 1) a survey of the advisory board in Year 2 to gain expectations and suggestions for implementation, and 2) the inclusion of select external partners (three workforce representatives and two employers) in the Year 4 interviews to gain final reflections on and impacts of the grant. Ideally, the evaluation would have collected feedback from external stakeholders in Year 3 as well; however, grant staff turnover and the restructuring of the grant team in Year 3 did not make a data collection with external partners feasible.
- Although strong participation was gained from Butler's grant staff and administrators, lower levels of participation was achieved with other stakeholder groups. Gaining more feedback from these stakeholders may have strengthened the evaluation.
 - Although the evaluation gained feedback from several faculty members in Year 2, only two faculty members participated in Year 3 interviews and no faculty provided feedback in Year 4. This lower participation was due to fewer faculty being asked to participate in the evaluation at the TAACCCT team's request, rather than the faculty's refusal to participate in the evaluation. The evaluation would have been strengthened through the administration of a faculty survey, which OEIE requested in Years 3 and 4. However, the Butler team decided to include a few faculty in the Year 3 interviews instead of administering the faculty survey. They also thought a faculty survey was not necessary in Year 4 because faculty feedback to date was comprehensive and an additional survey would gain no new information.

- Six advisory board members responded to the survey in Year 2 (a 33% response rate), and only five external partners (three workforce representatives and two employers) participated in the Year 4 interviews. Gaining more feedback from external partners (e.g., TAACCCT students' employers) throughout the grant could have provided more ideas for and strengthened project implementation as well as evidence of impact.
- The response rates on the TAACCCT student surveys were low: 19% (Year 2), 12% (Year 3), and 16% (Year 4). Gaining feedback from additional students would have provided a more complete picture of TAACCCT students' experiences with the grant, including grant impacts.
- Only seven students (8%) responded to the control group student survey, which limited the power of the comparison analyses and reduced the likelihood of finding differences between the groups on their survey responses.
- Student data profiles for the TAACCCT and control group students are based on data collected and provided by Butler grant staff. It should be noted that demographic and academic data points were more easily obtained by Butler. On the other hand, employment data were more difficult to obtain. It should be noted that numbers available to support the employment metrics do not necessarily mean that only those numbers of students achieved those metrics (e.g., obtained employment, received raises); it reflects only the evidence Butler was able to obtain through their student tracking efforts.

Lessons Learned

Team members learned the following lessons from their experiences working on the TAACCCT grant:

- Provide more communication and clarity at the beginning of the grant about how it is going to work and what is expected (e.g., development of the IT Institute, revision of curriculum), at the proposal phase if staff are brought in for consultation. Gain total commitment from all key players (e.g., faculty, administrators) prior to submitting the grant application. The role of faculty is critical, so their commitment/support needs to be gained before applying for a grant.
- Talk about sustainability throughout the project, not just at the end, so grant components can be included in future budgets. Make good purchasing decisions and incorporate long-range planning, especially for expensive equipment that requires continued licensing fees and upgrades. The initiative will only continue if administrators continue pushing it forward.
- Take time at the beginning of the project to get the right team in place (i.e., people who are a good fit for the grant roles). Ensure the grant is adequately staffed, including bringing in all grant staff early and quickly replacing grant staff when they leave.
- Establish and communicate the structure of authority on the grant. There must be someone in charge of the grant, with visible support from upper-level administrators, to move the project forward and hold team members accountable for meeting grant requirements and responsibilities. Be very clear about expectations and responsibilities, and willing to exercise accountability if team members are not completing responsibilities and meeting expectations.
- Increase visibility of the project at the college and in the community, to ensure everyone on campus knows what the grant is, where it is housed, who is involved, and expected outcomes. Communication, both internal and external to the college, should be targeted and intentional throughout the grant to increase clarity for team members, the college, and the community.
- Have a clear, realistic plan for marketing and connecting with populations of interest (e.g., veterans).
- Take a proactive approach with engaging internal and external partners earlier in the project and maintain buy-in throughout the grant. Be quick to work with external partners and solidify

agreements about roles and responsibilities. Include additional university IT chairs and faculty on the advisory board to help with articulation agreements.

- Keep programs current and based on industry needs.
- It would be beneficial to have an academic coach for all Butler degree areas, especially the big areas like IT.
- Utilize all available resources. It was beneficial to make connections with other institutions' TAACCCT teams to share successes, challenges, and lessons learned from working on TAACCCT.
- Meeting DOL data requirements was difficult.

Sustainability

- Butler will sustain components that have demonstrated success and fit into the college's strategic plan. Butler will budget for these components and explore additional funding options (other grants, student fees) to continue supporting and/or expanding them.
- Butler's plan for sustaining grant components includes:
 - Using the IT curriculum that was developed or revised through the grant
 - Using the technology (hardware) in the IT classrooms that was purchased through the grant, and making some equipment available to other non-IT departments
 - Posting trainings on the use of the technology online
 - Maintaining partnerships with advisory board members and Workforce Alliance, which will provide insight into industry needs and connections to work placement
 - Reviewing and modifying curriculum continuously, to keep training up-to-date with industry trends
 - Staying current with in-demand technology, so students are knowledgeable of and prepared to work with technology being used in the local workplace (hardware/software)
 - Implementing guided career pathways for IT programs and expansion to non-IT programs
 - Creating a Career Services office that will serve a similar function as the TAACCCT academic coach's employment services (e.g., interview and resume preparation, sharing job postings)
 - Continuing student employment opportunities such as internships and job placements
 - Continuing existing articulation agreements

Implications for the Future

- Implementation of the grant influenced Butler, but Butler knows more progress is needed to fully realize the goal related to institutional change. Butler will use grant successes as models to expand efforts on guided pathways, career services, and collaboration across instructional departments.
- Due to challenges experienced on this grant, Butler is taking a new approach to grants across the college. Butler now only applies for grants that fit within Butler's strategic plan; sets/focuses on clear goals; gains buy-in/commitment from all involved parties prior to submitting grant proposals; ensures grants have oversight, continuity, and accountability for team members; and makes expectations about grant roles/requirements clear to team members early in the project and includes more people on the team so turnover does not affect the running of the project.
- Butler could be more proactive related to gaining data on future grants. For example, Butler could initiate conversations and develop relationships necessary for collecting data early in the process and consider ways that participation in data collection activities could be bolstered, such as through the use of signed participant agreements where students agree to report back on employment data and/or by offering incentives for participation.

References

Dillman, D.A., Smyth, J.D., & Christian, L.M. (2014). *Internet, Phone, Mail, and Mixed-Mode Surveys: The Tailored Design Method, 4th edition*. Hoboken, NJ: John Wiley.

Appendix 1

Original Summary Evaluation
Plan Submitted with Proposal

Program Evaluation Plan – Butler CC TAACCCT

This project will implement a **comprehensive evaluation plan** that is informed by current research, integrated into all components of the project, and designed with the rigor and complexity needed for meaningful assessment of the Butler Community College (Butler CC) TAACCCT project. Components of the evaluation plan, described herein, are summarized in the following graphic as well as Table 9, Data Review Plan, of the Project Narrative.

Program Evaluation Plan Components
Quantitative Assessment of Participant Outcomes: analysis of participant outcomes based on quantitative measures consistent with DOL metrics, including comparison to non-participants
Program Implementation Evaluation: assessment of project implementation (process and progress), including fidelity of implementation methods
Qualitative Project-Specific Assessment: surveys, interviews, and other qualitative methods to assess components of the project and the impact on students, industry, and stakeholders

Formative feedback is an overarching element of evaluation to improve the project's success and enhance outcomes. The quantitative assessment of participant outcomes (DOL metrics) will involve a quasi-experimental design with well-matched comparison cohorts.

The Office of Educational Innovation and Evaluation (**OEIE**) has designed the evaluation and will implement it as the project external evaluator, in collaboration with the project leadership. As an experienced TAACCCT evaluator, OEIE is cognizant of the DOL reporting needs and will align evaluation reports to the project reporting schedule; including annual and final evaluation reports that address the required data analysis, as well as information to inform Butler CC's quarterly performance reports to DOL.

The evaluation plan is aligned with the Butler CC project objectives and the six design elements for the Information Technology Institute, as well as the TAACCCT national program priorities. A first step in evaluation will be working with the project leadership to create a logic

model based on Butler CC goals, objectives, and anticipated outcomes. OEIE employs the **logic model** approach to program evaluation, which builds on the W.K. Kellogg Foundation framework (Kellogg 2004)¹. The logic model provides a graphic representation of project activities, anticipated outputs, and the short-term and long-term outcomes of the program. Strategies for assessing the program's effectiveness will include both formative and summative evaluations that: 1) utilize multiple evaluation approaches, 2) draw on both qualitative and quantitative methodologies, 3) employ multiple evaluative research methods, and 4) triangulate data for more robust findings where possible.

Quantitative Assessment of Participant Outcomes – DOL Metrics: A critical component of the evaluation is assessing participant outcomes based on quantitative metrics consistent with specific DOL outcome measures, including comparison to non-participants. The project will collect and analyze DOL-defined metrics, support standardized methodology, and assure rigorous evaluation over the course of the grant period. The goal for the participant outcome evaluation design is to understand the Butler CC program's impact on student participants in terms of education retention and completion, and job placement, retention and earnings, compared to students not in the Butler CC grant-funded program.

OEIE will implement a quasi-experimental design with well-matched comparison cohorts, including strategies to isolate the effects of the program. While experimental design with randomized control trials are thought to be the preferred approach, there are a number of limiting factors that could impact the validity of the results in this situation. A rigorous alternative is the quasi-experimental comparison cohort approach. The “advantage of the quasi-experimental approach is that it is less intrusive to a program” and it is possible to “employ quasi-experimental methodologies without denying students the new support and services” (Campbell 2009)². This evaluation design will assess the impacts of the Butler CC project by

Butler Community College TAACCCT – Evaluation Plan

comparing outcomes for Butler CC participants with a matched comparison cohort. Careful cohort selection is fundamental to the study design and is a priority for this project.

The proposed comparison group will be the Butler CC Manufacturing Engineering Technology Program. The participant and comparison cohorts share similar technical fields of study and length of the program towards the acquired credentials (Certificate and AAS program, Manufacturing Engineering Technology). Both cohorts have a sufficient number of students to conduct appropriate statistical analysis to determine the strength of the effect. Outcome indicators for the Butler CC program participant and comparison cohorts will be tracked for reporting purposes through the end of the grant period. The project will collect and analyze data regarding the number of participants: served by the program, completing program, retained in the program, completing credit hours, earning credentials, enrolled in further education, employed after program, retained in employment, and realizing wage increases. Workforce data will be obtained from multiple sources including the Kansas Statewide Longitudinal Data System (SLDS) as well as student tracking and surveys. The OEIE evaluators will work in collaboration with the Butler CC project leadership for a seamless approach to capturing and analyzing the outcome metrics listed above for participant and comparison cohorts.

Program Implementation Evaluation: Evaluation of program implementation and formative feedback from OEIE is integrated into the project management to strengthen program planning and management over the course of this project. This assessment is designed to evaluate project progress and processes, to understand successes and stumbling blocks, and to answer DOL questions about project progress noted in the SGA (*V.C.I.b*). Evaluation methods to assess implementation include: review of project outputs and activities compared to the timeline/workplan; feedback from interviews of project leadership, college representatives, and stakeholders; document analysis of project records; and assessment of project implementation

strategies (e.g. operational strengths/weaknesses and implementation related to curriculum, delivery methods, program design, prior learning assessment). The assessment will also include fidelity of implementation methods as described in the Project Narrative to compare the actual program implementation with the project plan and further address the DOL questions. OEIE will work with the project leadership to assess performance and to provide ongoing feedback to improve project success. This assessment is also designed to provide information to funding agencies regarding outcomes and assessment of the program as a model for broader application.

Qualitative Project-Specific Assessment: The evaluation plan also includes qualitative methods to assess the impact of the Butler CC project related to: student experiences and learning outcomes; faculty training; student satisfaction with training/services; industry/partnership experiences; and feedback from students, industry, and college representatives regarding key components of the program. Student surveys will assess student satisfaction with the curriculum, method of delivery, pathway programs, and other program-wide variables. The assessment will include pre/post knowledge tests. Faculty surveys will provide feedback regarding curriculum, faculty training, and program components. Interviews and/or surveys of industry representatives and stakeholders will also provide feedback regarding project impact. The results of these methods will be used to assess components of the project and to enhance outcomes and project impact. Survey methodology will be based on the Dillman Method (2009)³ and focus groups will incorporate the Krueger and Casey (2009)⁴ approach to effective qualitative research. Results of the surveys/interviews will be available to the project after each assessment and summarized in the evaluation reports mentioned earlier.

Formative Evaluation and Feedback: Formative feedback is an overarching component of the evaluation for Butler CC. The goal of formative evaluation is to help programs use the evaluation results, make adjustments during project implementation, and to understand what works, and

Butler Community College TAACCCT – Evaluation Plan

under what circumstances. The formative feedback and evaluation recommendations will contribute to data-based decision-making as the project moves forward.

Third-Party Evaluator: The evaluation will be designed and implemented by the external evaluator, OEIE, in collaboration with the project leadership. Established at Kansas State University in 2000, OEIE has provided evaluation services for over 200 projects totaling over \$250 million sponsored by a broad range of federal funding agencies. The office serves as the external evaluator for a current TAACCCT Round 2 project, and has specific expertise regarding DOL program goals and expectations. Evaluation design and implementation at OEIE adheres to the American Evaluation Associations Guiding Principles for Evaluators and the Program Evaluation Standards of the Joint Committee on Standards for Program Evaluation. OEIE is a full service evaluation office with twenty full-time professional staff members including evaluators, project development and computer specialists, as well as part-time graduate and undergraduate research assistants. The office has been involved with the Kansas initiatives toward a Statewide Longitudinal Data System. Professionals in the office have extensive experience working with and accessing higher education data systems. For additional details regarding OEIE see: the Letter of Commitment and Statement of Qualifications, and the OEIE website www.oeie.ksu.edu. This project has a strong commitment to research-based decision-making and rigorous evaluation methods, as demonstrated by the resources, comprehensive integrated approach, and rigorous evaluation design presented in this proposal.

¹ W.K. Kellogg Foundation, (2004). Using Logic Models to Bring Together Planning, Evaluation, and Action, Logic Model Development Guide

² Campbell, P.B., Stoll, A., & Thomas, V.G. (2009). Evaluating Efforts to Broaden Participation in STEM Fields, Report from a National Science Foundation Workshop.

³ Dillman, D. A., Smyth, J. D., & Christian, L. M. (2009). Internet, Mail and Mixed- Mode Surveys: The Tailored Design Method, 3rd edition. John Wiley: Hoboken, NJ.

⁴ Krueger, R. A., & Casey, M. A. (2009). Focus Groups: A Practical Guide for Applied Research, Thousand Oaks, CA: Sage Publications.

Appendix 2

Detailed Evaluation Plan

**Trade Adjustment Assistance Community College Career Training
Grant Program: Round 3
Detailed Evaluation Plan – Butler Community College**

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II. Introduction

Evaluation Design and Overview:

The Butler Community College (Butler CC) TAACCCT project will implement a **comprehensive evaluation plan**, designed with the rigor and complexity needed for meaningful assessment and aligned with expectations of the Department of Labor (DOL). The evaluation design is informed by current research and integrated into all components of the project. Using a more developmental evaluation approach, the project leadership team and evaluators will work together to interpret evaluation findings, analyze implications and apply results to the next stage of development. This approach will support the development of the innovations and adaptations of interventions in the complex, dynamic environment of this TAACCCT project by collecting and reporting data on the implementation, progress, and outcomes of the project to inform policy and program decision-making. The **goal** of the evaluation is to provide feedback about how this substantive systems change is unfolding at Butler CC and help identify effective principles that can be used to inform practice, both at the college locally and for a larger audience. Through these efforts, the project team will be engaged in on-going evaluation capacity building.

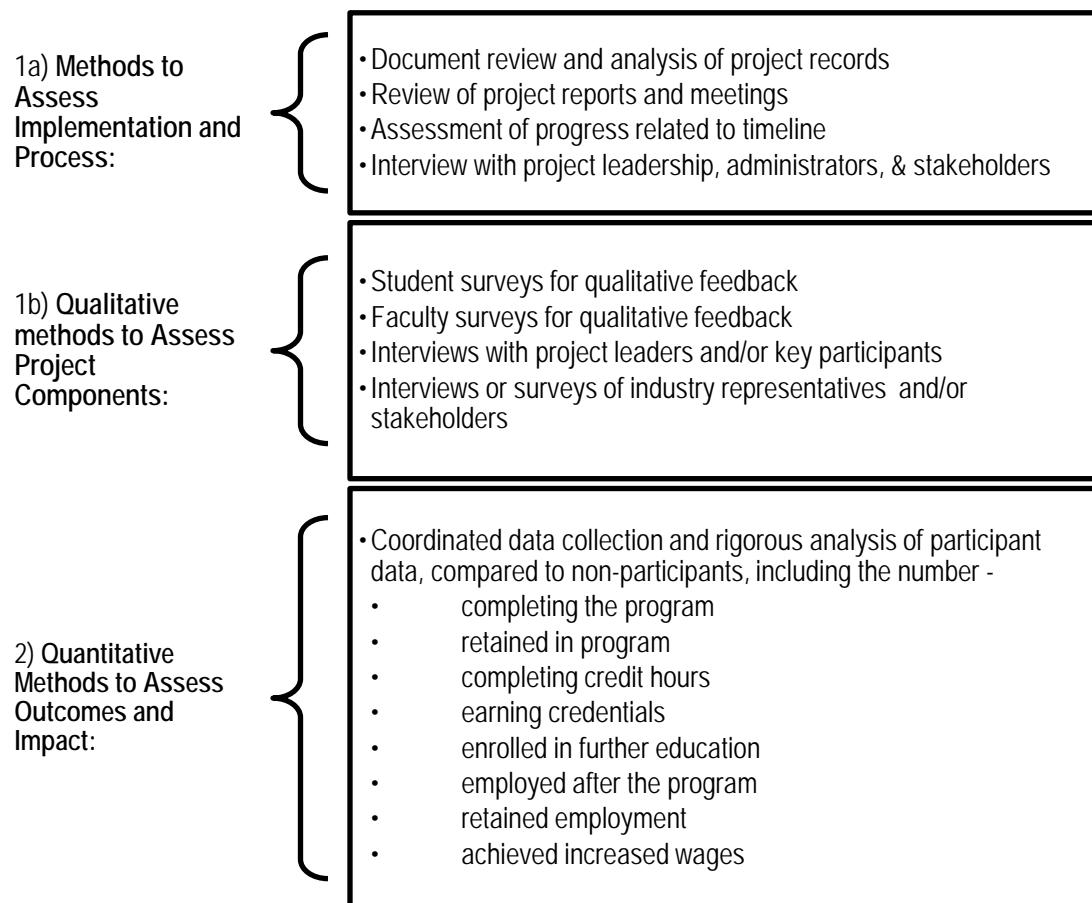
Overarching **evaluation/research questions** that will be used to guide this work include:

1. What is the progress toward implementing a program that meets the needs of student participants and industry, and what are the operational strengths and weaknesses?
2. What are the vision and values that will guide innovation?
3. What are the institutional conditions and environment within which activities will occur?
4. What factors affect and guide ongoing innovation and development?

Additional questions regarding program implementation are discussed in section IV, specifically the SGA research questions.

Components of the evaluation plan, described herein include: 1) implementation analysis aligned with the DOL SGA questions, consisting of a) methods to assess the progress and process of implementation, and b) qualitative methods to assess specific project components; and 2) detailed analysis of participant outcomes based on quantitative metrics consistent with DOL outcome measures, including comparison to non-participants. The evaluation plan also delineates meaningful reporting of evaluation results and feedback throughout the project to improve project management. Components and **data elements** of the evaluation plan are summarized below in Figure 1, and discussed in more detail later in this document.

Figure 1: Comprehensive Evaluation Plan



Evaluation **strategies** for assessing the program's implementation and effectiveness include:

1) utilizing multiple evaluation approaches, 2) drawing on both qualitative and quantitative methodologies, 3) employing multiple evaluative research methods, and 4) triangulating data for more robust findings where possible.

The evaluation plan is aligned with the Butler CC project objectives and the design elements for the Information Technology Institute, as well as the TAACCCT national program priorities. The third party evaluator, Office of Educational Innovation and Evaluation (OEIE), employs the **logic model** approach to program evaluation, which builds on the W.K. Kellogg Foundation framework (Kellogg 2004). See section IV for more detail and a preliminary logic model for the

Butler CC program. An early step in evaluation will be working with the project leadership to finalize the logic model based on Butler CC goals, objectives, and anticipated outcomes.

Reporting:

As an experienced TAACCCT evaluator, OEIE is cognizant of the DOL reporting needs and will align evaluation reports to Butler CC's project reporting schedule. This includes Annual (Interim) and Final Evaluation Reports that address the required data analysis regarding program participants, along with quarterly briefs on evaluation activities.

Quarterly briefs of evaluation activities and implementation progress will be provided to project leadership to inform Butler CC's Quarterly Progress Report to DOL. These briefs will be scheduled for delivery to Butler CC no later than 35 days after the end of each reporting quarter and will align with the quarterly report format required of TAACCCT grantees

OEIE will also provide Annual Evaluation Reports and a Final Evaluation Report no later than 35 days after the end of each reporting year. The Annual Evaluation Reports will contain preliminary analyses of participant outcomes, compared to non-participants, regarding: total unique participants served; number of participants who have completed the program; number of participants still retained in their program of study or another TAACCCT-funded program; number of participants completing credit hours; number of participants earning credentials; number of participants enrolled in further education after-grant funded program of study completion; number of participants employed after the grant-funded program of study completion; number of participants retained in employment after program of study completion; and number of those participants employed at enrollment who receive a wage increase post-enrollment (please note: most data elements are not applicable to the first year reporting. Full analyses will not be conducted until the end of the evaluation in the fourth year of the project).

Annual Evaluation Reports will also include information about evaluation design and evaluation findings-to-date specifically regarding the required research questions and efforts to expand institutional capacity. The Final Evaluation Report will be completed by September 30, 2017 and will contain final participant and cohort outcomes.

Third-Party Evaluator - OEIE:

The evaluation will be designed and executed by the third party evaluator, the Office of Educational Innovation and Evaluation (OEIE), in collaboration with the project leadership. Established at Kansas State University in 2000, OEIE has provided evaluation services for over 250 projects totaling over \$250 million sponsored by a broad range of federal funding agencies. OEIE serves as the external evaluator for two TAACCCT projects; a TAACCCT Round 2 consortium project and a Round 2 single-institution project. Evaluation design and implementation at OEIE adhere to the American Evaluation Associations (AEA) Guiding Principles for Evaluators and the Program Evaluation Standards of the Joint Committee on Standards for Program Evaluation. OEIE is a full service evaluation office with nineteen full-time professional staff members including evaluators, coordinators, project development and computer specialists, as well as part-time graduate and undergraduate research assistants. The office has a strong commitment to research-based decision-making and rigorous evaluation methods. OEIE has been involved with the Kansas initiatives toward a Statewide Longitudinal Data System (SLDS) through Kansas Department of Education (KSDE) and the Kansas Board of Regents (KBOR). Professionals in the office have extensive experience working with and accessing higher education data systems. For additional details regarding OEIE, see the website www.oeie.ksu.edu.

III. Intervention

Butler CC's intervention is the establishment of an evidence-based, workforce-centered model to train TAA, Veteran, and other displaced workers for jobs in the Information Technology sector. Using labor market statistics and input from regional employers regarding desired skills and knowledge of potential workers, career and employment pathways maps will be created and continuously updated. Student support services will be provided to improve retention and completion times. New technology will be implemented that will permit online/hybrid/blended learning, enabling students to complete credentials, certifications, and/or degrees when and where they are available.

These activities represent a systematic change in the way Butler CC designs and delivers technical training. This new approach includes a focus on integrating programs, providing students with additional on-ramps and off-ramps to career pathways. Through these efforts, Butler CC's model is designed to build institutional capacity through the following:

- Enhanced collaboration across instructional departments created by the reduction of existing program silos;
- Greater efficiencies in operation created by streamlining curriculum and program requirements, delivering core courses that address outcomes across multiple programs, and restructuring the distribution and use of limited institutional resources; and
- Opportunities to engage the community – from kindergarteners to senior citizens – in learning about careers, new technologies and other related issues of public interest.
- Increased engagement with regional Work Force Development System partners, allowing Butler CC to design, implement, and continuously update course offerings to fit the needs of both employers and workers in the regional labor market.

The evaluation will focus on the following components of Butler CC's intervention:

- Completion of skills based, workforce-centered model of training & education; learning outcomes of training provided on model; stakeholder involvement in development of evidence-based model
- Development of stacked & latticed credentials for IT occupations and 15 credit hour IT core skills curriculum that, combined, provide Career Pathways Maps for participants; stakeholder involvement in development
- Increase access & usage of online/blended learning for 5 IT courses
- Student Support Services provided and student usage of support services
- Process to assess skills and award credit for prior learning is adopted and utilized; Butler CC's PLA policy (before and after)
- Review and update of existing articulation agreements; Checklist of key requirements for inclusion in articulation agreements; Establishment of new articulation agreements; Butler CC's policy for articulation agreements
- Faculty training outcomes for Lecture Capture Software and enhanced classrooms
- Integration of 5 IT courses for online/blended learning
- Implementation of Quality Matters criteria
- Stakeholder involvement in creation of Employment Pathways
- Partnership agreements created and a system to track participant re-entry into the workforce established; stakeholder involvement in development

IV. Implementation Analysis Design

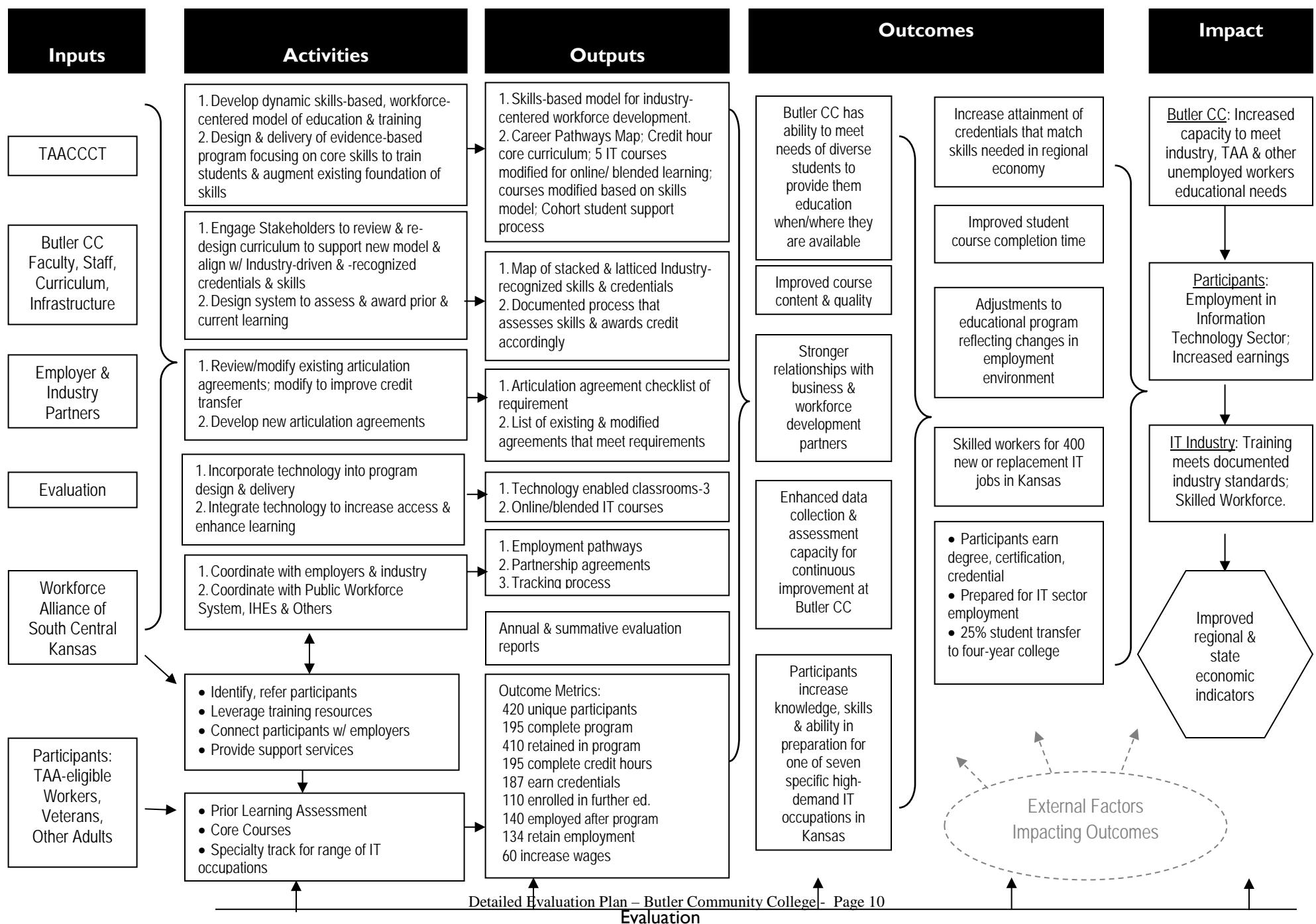
The evaluation plan is aligned with the Butler CC project design and goals and the TAACCCT program priorities to “build educational programs that meet industry needs, improve retention and achievement, and strengthen online learning.”

The evaluation is grounded on a **logic model** in order to fully assess the impact of the project compared to anticipated outcomes, project goals, and DOL-TAACCCT program goals and priorities. The project logic model, presented on the following page, provides a visual map of how components of this project accomplish these goals, and a graphic representation of project activities, anticipated outputs, and the short-term and long-term outcomes of the program.

The evaluation is also aligned with the Butler CC **project work plan** and timeline, including strategies to assess the success of steps taken to create and run the Butler CC training program, as well as the operational strengths and weaknesses of project components and overall implementation. More detail is provided in the following sections.

Figure 2: Logic Model for Evaluation

Logic Model for Evaluation - Butler Community College TAACCCT



IV.A. Implementation Analysis Research Questions

Program Implementation Evaluation:

Evaluation of program implementation is integrated into project management to strengthen program planning and management over the course of this project. This assessment is designed to evaluate project progress and processes, to understand successes and stumbling blocks, and to answer central questions about project progress. See the table below for indicators and methods aligned with the DOL Implementation Research Questions from the SGA (V.C.1.b).

Table 1: Implementation Research Questions, Assessment Indicators, Data Sources, and Methods

Implementation Research Questions	Assessment Indicators	Data Sources / Methods
1) Curriculum: <i>How was the particular curriculum selected, used, and/or created?</i>	<ul style="list-style-type: none">• Documentation of the design and implementation of IT curriculum aligned with evidence-based design• Assessment of curriculum use and delivery (online implementation, evidence-based design, etc)• Feedback from faculty, project leadership, and stakeholders• Feedback from students regarding content	<ul style="list-style-type: none">• Project implementation reporting• Document review of curriculum materials/ products/ qualitative information• Interviews with leadership and stakeholders• Interviews or surveys of project leadership, faculty, and stakeholders• Surveys of students
2) Program design, delivery, & administration. Student support: <i>How were programs and program designs improved or expanded using grant funds? What delivery methods were offered? What was the program administrative structure? What support</i>	<ul style="list-style-type: none">• Assessment of program implementation related to timeline and project plan• Assessment of institutional capacity changes• Documentation of innovative online & technology enabled learning, employer-sponsored workforce training implemented	<ul style="list-style-type: none">• Project implementation reporting• Document review• Interviews with Project Leadership• Document review: new credentials/ certificate structure• Interviews with administrators, project staff/ faculty regarding articulation/

Implementation Research Questions	Assessment Indicators	Data Sources / Methods
<p><i>services and other services were offered?</i></p>	<ul style="list-style-type: none"> • Assessment of career pathways created • Feedback from students regarding IT program and support services 	<p>career pathway/ delivery process</p> <ul style="list-style-type: none"> • Surveys of students
<p>3) Prior learning assessment. Career guidance: <i>Was an in-depth assessment of participants' abilities, skills, and interests conducted to select participants into the grant program? What assessment tools and processes were used? Who conducted the assessment? How were the assessment results used? Were the assessment results useful in determining the appropriate program and course sequence for participants? Was career guidance provided, and if so, through what methods?</i></p>	<ul style="list-style-type: none"> • Assessment of implementation related to timeline and project plan • Feedback from leadership/staff regarding PLA and guidance • Feedback from students regarding PLA and guidance 	<ul style="list-style-type: none"> • Project implementation reporting • Review skills mapping and PLA analysis • Interviews with Project Leadership • Interviews or surveys of guidance counselors • Surveys of students
<p>4) Partnership Contributions: <i>What contributions did each of the partners (employers, workforce system, other training providers and educators, philanthropic organizations, and others as applicable) make in terms of: 1) program design, 2) curriculum development, 3) recruitment, 4) training, 5) placement, 6) program management, 7) leveraging of resources, and 8) commitment to program sustainability? What factors contributed to partners' involvement or lack of involvement in the program?</i></p>	<ul style="list-style-type: none"> • Assessment of partnership contributions and implementation related to timeline and project plan • Feedback from leadership/staff regarding partnership and contributions • Feedback from students and participants regarding training, guidance, and placement providers/process 	<ul style="list-style-type: none"> • Project implementation reporting • Document review related to partnership • Interviews with Project Leadership and providers • Interviews or surveys of guidance counselors • Surveys of students

Implementation Research Questions	Assessment Indicators	Data Sources / Methods
<i>Which contributions from partners were most critical to the success of the grant program? Which contributions from partners had less of an impact?</i>		
5) Institutional Capacity <i>To what extent was there collaboration across instructional departments? What operational efficiencies were achieved through Butler CC's TAACCCT project?</i>	<ul style="list-style-type: none"> • Assessment of collaboration and capacity building related to timeline and project plan • Feedback from leadership, administrators and staff regarding capacity and collaboration 	<ul style="list-style-type: none"> • Project implementation reporting, • Document review related to collaboration / institutional capacity • Interviews with project leadership & faculty & staff • Strategies to collect qualitative information at Butler CC meetings/ events • Project implementation reporting

IV.B. Implementation Analysis Data Strategies

Evaluation methods and data sources for the implementation analysis, summarized in Figure 1, will include:

- document review and analysis of project records and outputs (regarding program design/ delivery/ administration, student support, prior learning assessment, partnership contributions, institutional capacity);
- review of project activities and products, including a checklist compared to the timeline/ workplan (e.g. skills-based model, career pathways map, 5 IT courses, articulation agreement, technology-enabled classrooms, etc.);

- interviews for feedback from project leadership, college representatives, and industry stakeholders (regarding improved course content, relationships with industry, and the success and impact of the Butler CC project);
- interviews or surveys of faculty, guidance counselors, and other student-support staff (for feedback regarding project components);
- surveys of students and participants (for feedback regarding the success of project components, meeting the needs of diverse students, and overall impact);
- strategies of gather information and feedback at Butler CC TAACCCT meetings, which may include focus groups and other strategy to assess collaboration, capacity building and implementation;
- assessment of project implementation strategies (e.g. operational strengths/weaknesses and implementation related to curriculum, delivery methods, program design, prior learning assessment).

The assessment will also include fidelity of implementation methods as described in the Project Narrative to compare the actual program implementation with the project plan and further address the DOL questions. OEIE will work with the project leadership to assess performance and to provide ongoing feedback to improve project success. This assessment is also designed to provide information to funding agencies regarding outcomes and assessment of the program as a model for broader application.

Qualitative Project-Specific Assessment:

The qualitative methods listed above will assess the impact of the Butler CC project related to: student experiences; faculty training; student satisfaction with training/services; industry/partnership experiences; and feedback from students, industry, and college representatives regarding key components of the program. Student surveys will assess student satisfaction with the curriculum, method of delivery, pathway programs, and other program-wide variables. Faculty surveys will provide feedback regarding curriculum, faculty training, and program components. Interviews and/or surveys of industry representatives and stakeholders will also provide feedback regarding project impact. The results of these methods will be used to assess components of the project and to enhance outcomes and project impact. Survey methodology will be based on the Dillman Method (2009) and focus groups will incorporate the Krueger and Casey (2009) approach to effective qualitative research. Results of the surveys/interviews will be available to the project after each assessment and summarized in the evaluation reports.

A primary goal of the evaluation is to help programs use the evaluation results, make adjustments during project implementation, and to understand what works, and under what circumstances. The feedback and evaluation recommendations will contribute to data-based decision-making as the project moves forward.

OEIE will provide feedback to the project leadership, especially findings that may improve project management or details of the program. Generally, this type of feedback results in strategies to fine-tune a program or process, rather than any major change in the approach and program design. However, we will coordinate the assessment of implementation with the assessment of outcomes, to ensure that any major changes to program implementation will not

affect the outcome assessment. This includes documentation of what happens/when and documentation of the timeline of recommendations from the evaluator regarding emerging issues and program design. This will enable the results of the more formative feedback to be overlaid with the implementation so as not to skew the overall evaluation results.

V. Outcomes/ Impact Analysis Design

The IT Institute at Butler CC represents a systemic change in how the college designs and delivers technical training. As a new program, with relatively small numbers projected for enrollment (N= 420) and program completion (N=195) over the course of the project, the evaluation proposes to conduct a descriptive outcome analysis that can be benchmarked to other technical education programs at the college to demonstrate the level of performance or success of the IT Institute students. The proposed group to be benchmarked against will be a cluster of technical programs that have a tie to manufacturing and manufacturing-related jobs in the same regional economy to be served by the IT Institute. Those programs are Manufacturing Engineering Technology, Composites, Welding, and Marketing and Management. Those programs share with the IT Institute similar technical fields of study and length of the program towards the acquired credentials (Certificate and AAS program), and are based on similar core skills and abilities, as well as having comparable job demands for program completers. All of Butler's career and technical programs are designed to support workforce development in the Wichita Metropolitan economy. They draw from the same population base, and completers from all programs generally stay in the region to pursue employment. In addition, the local market has a heavy representation of employers in the manufacturing sector. As a result, many of Butler CC's completers obtain jobs in this sector, even if their program of study was in a different field, such as IT. This environment further supports using this cluster of technical programs as the

comparison cohort for the IT Institute program. Initially, the evaluation explored the use of a quasi-experimental design. However, recognizing the challenges of smaller sample studies, the evaluators and project team discussed there would be a high risk of making a type 2 error - not being able to reject the null hypothesis, even though there is an effect. In other words, such a design would likely limit the project to only seeing the large differences, or big “effects” that would be needed in such a comparative analysis.

As a preliminary review, the evaluation team utilized resources from the National TAACCCT Evaluation webinar held on April 1, 2014, “Understanding Sample Sizes Needed for Impact Analysis”. Using the formulas and values provided in this session, the team plugged in participant projections from BUTLER CC to see what the minimum detectable effect (MDE) would be for this small sample study. Based on project estimates on a particular outcome, the team assumed the N for the study would be 120, with half of the people in the treatment group and half in the comparison, all reporting wage data. Using standard values for the other variables (see table below) in a two-tailed test, the MDE was found to be \$2,504. Particularly as a new training program for Butler CC, it is anticipated that impacts would not be this large, and thus would not be detectable in this design.

Table 2: MDE Calculations

MDE Calculations for Continuous Variable – Not RCT						
Z	Sigma	R ²	P	N	R ² _A	MDE
2.8	4899	0.2	0.5	120	<u>0.2</u>	2504.407

However, through the innovations planned as part of the IT Institute, including the wrap-around student support services, use of online/blended learning environments and increased focus on career pathways, the college does anticipate seeing an improvement in participant outcomes. Further details about the outcome analysis are described in the following sections of the evaluation plan.

V.A. Outcomes/ Impact Analysis Research Questions

The following research questions will be used to guide the data collection and analysis for the outcome analysis design:

1. What is the difference in persistence, completion and employment outcomes among students who utilize program services and those in a benchmarked program (the cluster of programs related to manufacturing) other technical education programs at Butler CC?
2. To what extent does the program use career pathways, academic instruction and student support services to improve student outcomes?
3. To what extent does the program efficiently leverage resources to improve student outcomes accomplish the stated program goals?

V.B. Outcomes Analysis

A critical component of the evaluation is assessing participant outcomes based on quantitative metrics specified by the Department of Labor. As described in the technical proposal, the innovations included in program design are intended to improve participant outcomes. For example, the wrap-around student support services are designed to enhance retention, increase number of credit hours earned and improve credential attainment. In addition, local industry and

employers will be engaged for the purpose of enhancing career pathways in the IT field in the south central region of Kansas.

The evaluators will work in collaboration with the project team to maximize utility of the Banner data system at Butler CC to track outcome data. Through a formalized intake process, IT Institute participants will be flagged in the system to streamline collection efforts as many of the data are currently in the Banner system. Student enrollments are projected to begin in Year 2 of the project, and the outcomes will start to be tracked at that time. However, the nature of many of the outcomes will require data to be tracked over multiple academic terms (i.e., number of program completers, number of credentials earned, etc.). As a result, measures will be compiled annually to ensure that all data points are being captured. However, the actual analysis (calculations and computations) of the outcomes will not be conducted until the end of the project period in the final evaluation phase.

V.C. Experimental Design (if selected method for impact analysis)

Experimental Design was not selected as the method for Impact analysis. Please see section V.D. for information on the proposed methods for the outcomes analysis.

V.D. Non-Experimental Design (if selected method for impact analysis)

As described above, the evaluation proposes to conduct a descriptive outcome analysis to examine the effects of the program on the participants. The programs of study within the Institute are integrated, which allows students to attain core skills relevant across many occupations, obtain specialized training in a desired occupation, and earn credentials at three different levels in each program track. The Institute concept also includes a deep vertical

integration of training from credit courses, internships, etc. down to short-term noncredit training to community outreach and high school academies.

By contrast, the college's approach to technical training outside of the IT Institute is a more traditional model - fragmented offerings of workshops, certificates, degree programs across many occupations. There's no coherence, no effective collaboration in teaching or learning activities, no efficiencies of scale. Students have no pathway through these programs and they are not always learning technical skills that meet current industry standards. Nor are they necessarily learning the soft skills that are equally critical to success in their chosen occupation. If they are exposed to those skills, chances are they are not embedded in learning activities that contextualize them appropriately.

Recognizing these challenges, Butler CC's approach to the IT Institute is qualitatively and systemically different than the approach to virtually all other programs in their technical training divisions. Given that students in most of the CTE programs are essentially the same in socioeconomic status, readiness for college, age, gender, it would be possible to aggregate the other CTE programs into a larger comparison group, excluding Allied Health, which already has a high school academy, and Nursing, which already uses this more holistic approach to technical training.

The Logic Model for Evaluation, included in this evaluation plan, provides a framework for comparative analysis. These other programs will not seek the same inputs, won't act on those inputs effectively to achieve the same outputs, create the same outcomes or have the same impact as what the college would expect from the IT Institute. So the comparative analysis would proceed along two lines – an evaluation of the structure and operations of the comparison programs and an assessment of student success. It is important to note that once participant and

comparison program students have been identified, they will stay in these groups for the remainder of the study regardless of whether or not they completed their certificate or degree program, or if they start a new program. This will ensure that the student groups will not be mixed.

Cohort profiles will be developed for the IT Institute participant group and the comparison program. Given the smaller sample size limitations for the college, participants in these cohorts will not be matched; rather, aggregate data for each group will be used in the descriptive study. Key attributes that may be likely to affect outcomes such as socioeconomic factors, years of employment, education level, age, race/ethnicity, and gender will be included in these profiles to provide a comprehensive view of each cohort. Once this context is established, the participant outcomes can then be benchmarked to the comparison program data to show effects of the IT Institute.

V.E. Outcomes/Impact Data Collection and Analysis

The OEIE evaluators will work in collaboration with the Butler CC project leadership for a seamless approach to capturing and analyzing the outcome metrics listed above for participant and comparison cohorts. Data will be collected and tracked annually throughout the project period. As described previously, much of the data required for the outcomes analysis is currently being captured in the Butler CC student information system, Banner. The evaluation team will collaborate with the project leadership to develop a formalized intake process for the IT Institute students. This process will help ensure that the project is able to collect data from the Institute students, such as pre-program earnings or employment status.

In addition to the self-report data collected from participants in the project, employment and wage data will be requested through the Kansas Board of Regents' partnership agreement with

the Kansas Department of Labor. As part of the state's longitudinal data base system, Kansas' postsecondary system has developed a relationship with the workforce system to facilitate access and use of data for projects like the TAACCCT grants. The evaluation team will work with Butler CC to submit the official request and complete the formalized data sharing agreements needed to be able to access these data. As this process typically takes some time to complete, the evaluation team will start the preliminary work immediately, with the intention of having all details finalized by the fall of 2014.

As shown in the table on the following page, outcomes will generally be analyzed using descriptive statistics. Based on the sample size and make-up of the cohorts, the evaluation team plans to use independent sample t-test analyses, or the nonparametric equivalent, Mann-Whitney U, in the analyses. The team also plans to conduct content analyses on the qualitative responses from the focus groups and surveys. The OEIE evaluators will work in collaboration with the Butler CC project leadership for a seamless approach to capturing and analyzing the outcome metrics listed below for participant and comparison cohorts.

Table 3: Outcome Analysis Questions, Methods/Data Sources, and Analysis

Butler Community College IT Institute – TAACCCT Round 3		
Outcomes Analysis Research Questions	Method/Data Sources	Analysis
What is the difference in persistence, completion and employment outcomes among students who utilize program services and those in other technical education programs at Butler CC?	(see below)	(see below)
1. Unique Participants Served	Document Review of Student Data (from Banner system)	Descriptive data analysis of quantitative data - (Mann-Whitney U) comparing IT Institute students and other technical education students not in this program
2. Participants who have Completed a TAACCCT-Funded Program		
3. Participants Still Retained in Their Program of Study or Another TAACCCT-Funded Program		
4. Participants Completing Credit Hours		
5. Participants Earning Credentials		
6. Participants Enrolled in Further Education After Grant-Funded Program of Study Completion		
7. Participants Employed After Grant-Funded Program of Study Completion		
8. Participants Retained in Employment After Program of Study Completion.		
9. Participants Employed at Enrollment who Receive a Wage Increase Post-Enrollment		
To what extent does the program use career pathways, academic instruction and student support services to improve student outcomes?	Survey and focus groups - program participants, project staff, college staff	Content analysis of qualitative responses Descriptive data analysis
To what extent does the program efficiently leverage resources to accomplish the stated program goals?	Focus groups and document review of project materials and records – project staff, college administration, project partners (industry and employers)	Content analysis of qualitative responses Descriptive data analysis

VI. Limitations

While the project believes that the overall design is a solid approach, there are a number of challenges and limitations relating to the execution of the evaluation. Some of these that have been referenced earlier in this plan include:

1. Small Sample Size. As a single institution awardee, participants in the IT Institute will only come from Butler CC. Projections for participation and completion of the program of study are less than 450 and 200, respectively. While these figures will provide the college with substantive feedback on the development of a new program, they are not large enough employ more advanced causal analyses preferred by the Department of Labor for the outcomes analysis. The proposed benchmark design will allow the project to review outcomes from the IT Institute participants against students in the other technical education programs at Butler CC using descriptive analyses. The intent is by providing the descriptive analyses, in conjunction with the more qualitative aspects of the developmental evaluation, the project will have substantive data to examine its innovations.
2. Institutional Data Reporting Timelines. The Kansas Board of Regents (KBOR) is the coordinating body for public two-year institutions in the state. As such, KBOR requires community colleges to track and report a variety of data for state and federal reporting. Many of the data points that will be tracked in the TAACCCT project are included in the state reporting system. While this will be helpful to the overall evaluation process, timelines for data collection and reporting will need to be coordinated to best optimize

the data systems already in place. Currently, institutions submit data in September annually for prior academic year. For example, Butler CC will submit the 2013-2014 AY data to KBOR by September 30, 2014. This timing will be important as the request for wage data will go through KBOR, so coordinating these efforts will streamline processes.

3. Ability to Collect TAA/WIA status. As noted, most of the educational outcomes for the project are already being tracked through Butler CCs data system. Through the use of a formalized intake process, additional variables such as TAA or WIA status, can be collected for the IT Institute participants. However, these types of data will not be as readily accessible for students in the comparative group. The project plans to explore ways to partner with the local workforce center, which may provide opportunities to capture these data, but currently this is a limitation. The project will also coordinate with other prior TAACCT grantees in the state to see what other alternatives have been employed in this regard.
4. Ability to Collect Employment/Wage Data. Unlike the educational outcomes noted by DOL, most community colleges do not systematically track their students once they leave the college and transition to the workforce. Self-report data is used in some situations, with varying levels of detail. Kansas does have a statewide longitudinal data system (SLDS) that has incorporated postsecondary and labor data. The project intends to work through KBOR to be able to access these data; however the system is relatively new and the process for securing these data can be lengthy. By starting the request process promptly, the project hopes to have access to data by the end of the grant.
5. Agency Data Reporting Timelines. Beyond the timeline from the institution, wage data, typically from UI records, may also be delayed by a quarter or more. Given the outcome

measure definitions, the project will develop a tracking system to record quarter of completion and quarter of employment. However, depending on how quickly these data are reported to the Department of Labor, the project may be required to track certain metrics for multiple quarters.

VII. Reports

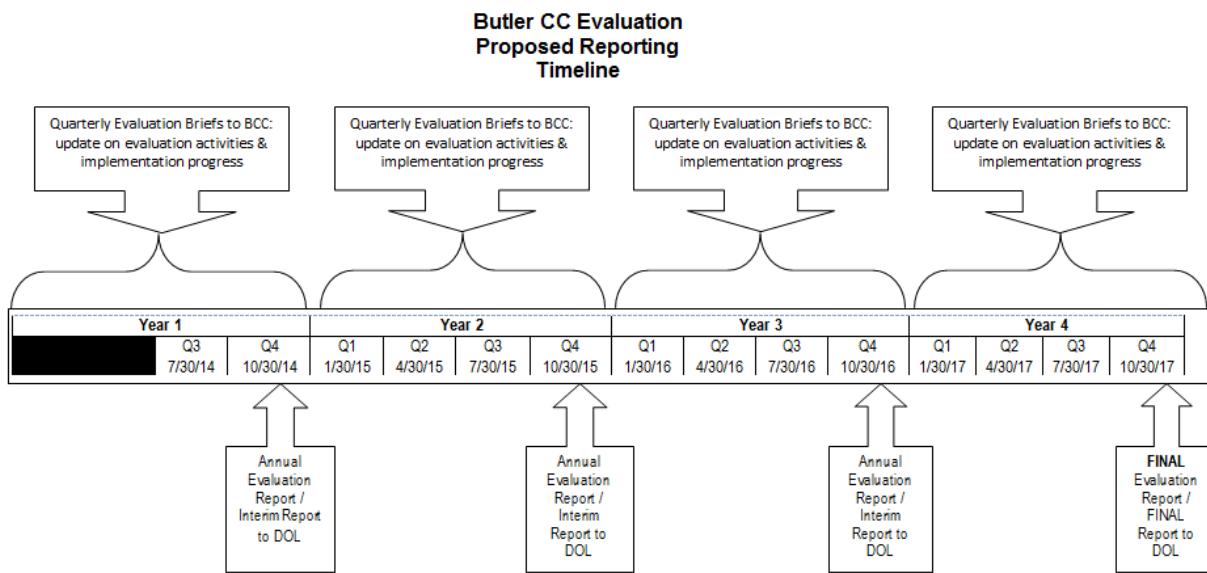
Using the developmental evaluation approach provides a framework to report the results from both the implementation and the outcomes impact analyses. As stated earlier, OEIE will provide feedback to the project leadership, especially findings that may improve project management or details of the program. We will coordinate the assessment of implementation with the assessment of outcomes, to ensure that any major changes to program implementation will not affect the outcome assessment. This includes documentation of what happens/when and documentation of the timeline of recommendations from the evaluator regarding emerging issues and program design. This will enable the results of the more formative feedback to be overlaid with the implementation so as not to skew the overall evaluation results.

OEIE will provide quarterly briefs of evaluation activities and implementation progress to project leadership to inform Butler CC's Quarterly Progress Report. These quarterly briefs will be scheduled for delivery to Butler CC no later than 35 days after the end of each reporting quarter to inform Butler CC's Quarterly Progress Reports. OEIE will also provide Annual (Interim) Evaluation Reports and a Final Evaluation Report no later than 45 days after the end of each reporting year. Annual Evaluation Reports will contain analysis of implementation as well as evaluation findings-to-date, including participant outcomes, compared to non-participants, regarding: total unique participants served; number of participants who have completed the program; number of participants still retained in their program of study or another TAACCCT-

funded program; number of participants completing credit hours; number of participants earning credentials; number of participants enrolled in further education after-grant funded program of study completion; number of participants employed after the grant-funded program of study completion; number of participants retained in employment after program of study completion; and number of those participants employed at enrollment who receive a wage increase post-enrollment.

Annual Evaluation Reports will also include information about evaluation design and evaluation findings-to-date specifically regarding the required research questions and efforts to expand institutional capacity. The Annual Evaluation reports will include aggregate data regarding program participants. The Final Evaluation Report will be completed by September 30, 2017 and will include both annual and cumulative information for Butler CC's TAACCCT project as well as final participant and cohort outcomes. Quarterly Evaluation Briefs will follow the format for grantees, "Annual and Quarterly Program Reporting Forms & Instructions," OMB Control Number 1205-0489, Expiration: 03/31/2015. The format for Annual (Interim) Reports will follow the forthcoming guidance mentioned on the *TAACCCT Webinar: Round 3 Third-Party Evaluations* webinar held on April 11, 2014.

Figure 3: Proposed Evaluation Reporting Timeline



Other evaluation activities for Butler CC's TAACCCT project, including milestones are detailed in the timeline provided below.

Table 4: Proposed Evaluation Activities Timeline & Milestones

PROPOSED PRELIMINARY EVALUATION TIMELINE – Butler Community College TAACCCT Project KEY: X= primary work; x= follow-up & on-going	2013/14			2014/15			2015/16			2016/17		
	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep
Evaluation Plan Design and Start-up												
Develop/finalize evaluation plan and develop the communication network with Butler CC TAACCCT leadership <i>(Deliverable: Updated evaluation plan, strategies, and timeline.)</i>	X	X	X	X	X				X		X	
Implement the evaluation plan in collaboration with Butler CC TAACCCT leadership (<i>Deliverable: Meetings and online communication; collaborate with Butler CC TAACCCT leadership regarding evaluation activities.</i>)			X	X	X	X	X	X	X	X	X	X
Refine research questions or modify evaluation plan as needed	X	X		X			X		X		X	
Instrument Development, Establish Protocols, Collaborate												
Collaborate with Butler CC TAACCCT leadership to establish protocols and project reporting needs and develop a process for collecting and sharing project records, documents, and other resources	X	X	X		X			X		X		X
Design survey and /or interview instruments (below) to assess program components and outcomes ; collaborate with Butler CC TAACCCT team for contacts and process (<i>Deliverable: Survey and /or interview instruments specific to group/project component.</i>)			X	X			X		X			X
1) Student Surveys: feedback regarding curriculum, instructional design and delivery, online/hybrid/distance learning tools, credential/certificate/degree programs, career guidance, student support, prior learning assessment/credits, career pathways, classroom space, job placement, etc.			X	X			X		X			X
2) Faculty/Administrators: feedback regarding professional development, curriculum, program, and classroom space				X			X		X			X
3) Industry: feedback about engagement, experiential learning opportunities, and collaboration				X			X		X		X	X
Collaborate with Butler CC leadership regarding student data & DOL metrics : assure Butler CC system captures data needed to assess & track student outcomes; finalize protocols for collecting quantitative data aligned with specific DOL measures			X	X	x	x	X	x	x	x	x	x
Data Collection and Analysis												
Program Implementation Analysis: document analysis of project records and outputs; checklist related to timeline & workplan; interviews with project staff; gather information at Butler CC TAACCCT meetings and via correspondence. <i>(Deliverable: Formative feedback to the Butler CC TAACCCT leadership. Report/findings regarding project implementation. Documentation for project reporting.)</i>				X	X	x	x	X	X	x	X	X
Obtain data from Butler CC TAACCCT and analyze quantitative data regarding student participation, credentials earned, employment, and other participant outcomes aligned with specific DOL outcome measures. (<i>Deliverable: Report/findings of comparative analysis of quantitative data regarding student participation and outcomes aligned with DOL metrics.</i>)					X	X	X	X	X	X	X	X
Administer surveys/interviews listed above, analyze results, and summarize feedback from: 1) students; 2) faculty/administrators; 3) industry (<i>Deliverable: Summary of analysis/results of specific surveys/ interviews available with quarterly reports.</i>)				X		X		X	X	X	X	X
Reporting and Project Coordination												
Communicate with Butler CC TAACCCT leadership team on an ongoing basis. Provide formative feedback . (<i>Deliverable: Presentations and communication for formative feedback.</i>)	X	X	X	X	X	X	X	X	X	X	X	X
Provide evaluation reports based on the results of assessment and evaluation activities. (<i>Deliverable: Quarterly report of evaluation activities; Annual Evaluation Reports and Final Evaluation Report.</i>)			X	X	X	X	X	X	X	X	X	X
Participate in DOL TAACCCT webinars, conferences, and stay informed through TAACCCT evaluator/online resources. Communicate with and respond to DOL national evaluator if requested	X	X	X	X	X	X	X	X	X	X	X	X
Assist with capacity building so Butler CC TAACCCT will be able to assess outcomes beyond grant period and sustain the program (<i>Deliverable: Project-specific evaluation tools for use by the college after grant period.</i>)										X	X	X

VIII. Reference List

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Appendix 3

Evaluation Deliverables -
Years 1 - 4

Butler Community College TAACCCT**OEIE Evaluation Deliverables****10/1/13 to 9/30/17**

Products Delivered	Date
<i>Evaluation Plan Design:</i>	
Detailed Evaluation Plan, with logic model	5/15/14
MOU/Evaluation Scope of Work (Contract) with reporting timeline	5/20/14
IRB application submitted to K-State Compliance Office	9/4/14
Options related to collecting data from external committee (focus group vs. survey)	2/6/15
Options related to the internal focus groups	3/12/15
Summary plan for cohort comparison study	6/25/15
K-State's review of the Non-Disclosure Agreement (NDA)	7/22/15
K-State's review of the NDA resubmitted	9/03/15
Revised NDA submitted to Gene	9/08/15
Evaluation Timeline revision	3/9/16
Evaluation Timeline revision	3/29/16
Data Collection Plan Summary for Summer 2016	5/19/16
Revised Year 4 Evaluation Timeline	1/20/17
<i>Evaluation Instruments:</i>	
Instruments developed for submission with K-State IRB application (surveys for advisory committee, students, other stakeholders; focus group for faculty; and interview protocols for internal team members – administrators and project management team)	9/4/14
Key stakeholder interview protocols	11/7/14
Web-based student follow-up survey that could be used by BCC quarterly	11/25/14
Workforce planning model focus group questions	1/13/15
Key stakeholder interview questions to share with interviewees	2/2/15
External committee focus group questions	2/6/15
External committee survey	2/6/15
Internal group focus group questions - revised	2/6/15
Key stakeholder interview questions - revised	2/6/15
Administrator focus group questions - revised	3/12/15
Description to share with team members regarding topics of focus group	4/2/15
Student Feedback Survey – draft in Word and online link	4/14/15
Student Feedback Survey - revised	4/22/15
Advisory Board Survey – revised (2 versions – 1 for board members, 1 for BCC staff)	4/22/15
Student Feedback Survey	12/30/15
Advisory Board Survey – drafts of 2 versions (board members, BCC staff participants)	12/30/15
BCC TAACCCT team member interview protocols – drafts of 3 versions (administrators, faculty, TAACCCT staff)	12/30/15
Internal TAACCCT team member interview questions (administrators & staff) revision	3/9/16
Student Feedback Survey revision	3/9/16
Faculty Survey initial draft	3/9/16

Butler Community College TAACCCT**OEIE Evaluation Deliverables****10/1/13 to 9/30/17**

External Partner Survey revision	3/9/16
Internal TAACCCT team member interview questions revision	3/29/16
Faculty Survey revision	3/29/16
Student Feedback Survey revision	3/30/16
External Partner Survey revision	3/30/16
Student Feedback Survey (resent requesting feedback)	4/7/16
Faculty Survey (resent requesting feedback)	4/14/16
Internal TAACCCT team member interview questions (resent requesting feedback)	5/19/16
External Partner Survey (resent requesting feedback)	5/19/16
Faculty Survey (resent requesting feedback)	5/19/16
Internal TAACCCT team member interview questions (resent requesting feedback)	6/22/16
IT Faculty Survey	1/20/17
TAACCCT IT Student Survey	1/20/17
CTE Control Student Survey	1/20/17
TAACCCT Staff and Administrator Interview Questions	1/20/17
Butler High-level Administrator Interview Questions	1/20/17
Butler Advising Staff Interview Questions	1/20/17
Employer Interview Questions	1/20/17
Form to gain updates to the DOL SGA implementation questions and status of intervention components	1/20/17
Re-sent Faculty Survey, TAACCCT IT Student Survey, and CTE Student Survey	2/14/17
Workforce Partners Interview Questions	3/10/17
Re-sent Workforce Partners Interview Questions	4/19/17
Workforce Partners Interview Questions revision	4/20/17
<i>Evaluation Reports/Documents:</i>	
Revised reporting timeline	5/26/14
Year 1 Annual Evaluation Report	9/26/14
Year 2 Quarter 1 Evaluation Summary	12/23/14
Year 2 Team Member Interviews Report	3/31/15
Year 2 Quarter 2 Evaluation Summary	3/31/15
Faculty Focus Group Report	5/11/15
Advisory Board Feedback Survey Report	6/5/15
Student Feedback Survey Report	6/10/15
Administrator Focus Group Report	6/26/15
Year 2 Quarter 3 Evaluation Summary	6/26/15
Document Review Spreadsheet	7/9/15
Document Review Spreadsheet (updated)	8/25/15
Degree and Certificate Mapping Spreadsheet	9/25/15
Interim Evaluation Report	9/25/15
Revised Interim Evaluation Report	11/24/15
Revised Degree and Certificate Mapping Spreadsheet	11/24/15
Year 3 Quarter 1 Evaluation Summary	12/30/15
Finalized Interim Evaluation Report	2/4/16

Butler Community College TAACCCT**OEIE Evaluation Deliverables****10/1/13 to 9/30/17**

Year 3 Quarter 2 Evaluation Summary	3/31/16
Student Feedback Survey Report	6/16/16
Year 3 Quarter 3 Evaluation Summary	6/30/16
Year 3 Team Member Interviews Report	9/16/16
Year 3 Annual Evaluation Report	9/30/16
Document Review Spreadsheet	9/30/16
Year 4 Quarter 1 Evaluation Summary	12/29/16
Year 4 Quarter 2 Evaluation Summary	3/31/17
TAACCCT IT Student Survey Report	6/26/17
CTE Student Survey Report	6/26/17
Grant Staff, Administrators, and Partners Interview Report	6/30/17
Year 4 Quarter 3 Evaluation Summary	6/30/17
TAACCCT and CTE Student Surveys Comparison Report	7/21/17
Final Evaluation Report	9/15/17
Document Review Spreadsheet	9/15/17
Final Evaluation Report revision	9/26/17
Services Rendered/Provided	Date
Data Collections:	
Document review of project materials shared by TAACCCT staff	8/20/14-9/15/17
Team member face-to-face interviews (13) (El Dorado and Andover, KS)	2/18/15-2/19/15
Team member telephone interview (1)	2/24/15
Faculty Focus Group (Andover, KS)	4/7/15
Student Feedback Survey (online)	4/22/15-5/15/15
Advisory Board Feedback Survey (online – 2 versions)	4/23/15-5/8/15
Administrator Focus Group (El Dorado, KS)	5/11/15
Requested DOL and Butler Board of Trustees reports for document review	3/23/16
Followed up by email with Butler with list of previously shared reports	3/25/16
Administered Student Feedback Survey	4/13/16-5/6/16
Requested DOL and Butler Board of Trustees reports for document review	6/22/16
Team member face-to-face interviews (7) (Andover and El Dorado, KS)	7/14/16-7/15/16
Requested DOL and Butler Board of Trustees reports for document review	7/18/16
Team member telephone interview (1)	8/11/16
TAACCCT Student Feedback Survey	3/29/17-5/7/17
CTE Student Feedback Survey	4/5/17-5/7/17
Face-to-face Interviews with grant staff, administrators, and partners (15) (Andover and El Dorado, KS)	4/27/17-4/28/17
Telephone interview with grant partner (1)	5/2/17
DOL SGA implementation questions and status of intervention components update	5/23/17-6/29/17

Butler Community College TAACCCT**OEIE Evaluation Deliverables****10/1/13 to 9/30/17**

Meetings/Events: (includes communication team meetings, special events, coordination/strategic planning meetings)	
National TAACCCT Evaluation Webinar (Comparison Groups)	11/19/13
National TAACCCT Evaluation Webinar (Obtaining Student Data from TAACCCT Evaluation)	12/3/13
National TAACCCT Evaluation Virtual Roundtable (Comparison Group Designs)	12/17/13
Conference call with BCC team	2/26/14
National TAACCCT Evaluation Webinar (Power Analysis – Understanding Sample Sizes Needed for Impact Analysis)	4/1/14
National TAACCCT Evaluation Webinar (Detailed Evaluation Plans TAACCCT Round 3)	4/11/14
Conference call with BCC team	5/7/14
National TAACCCT Evaluation Virtual Roundtable (Addressing Data Challenges in Your Evaluation)	6/23/14
Conference call with project team related to Scope of Work and reporting timeline	6/25/14
DOL TAACCCT Region 5 Meeting (Chicago, IL)	7/8/14-7/10/14
Transformative Change Initiative Meeting on Evaluating Employer Engagement and TAACCCT (Washington, DC)	9/16/14-9/17/14
TAACCCT On! Conference (at Washburn University in Topeka)	10/1/14-10/2/14
Project update meeting with PM team (face-to-face, at TAACCCT On!)	10/1/14
Transformative Change Initiative Evaluation Collaborative meeting (pre-meeting at American Evaluation Association annual conference in Denver, CO)	10/15/14
Brief project update meeting with PM (telephone) (in place of IR Team/PM Meeting)	10/24/14
Site visit to BCC Andover campus, including facility tour	10/27/14
Executive Team Meeting (face-to-face, at BCC Andover)	10/27/14
Project update meeting with PM team (face-to-face, at BCC Andover)	10/27/14
Brief project update meeting with PM (telephone) (in place of IR Team/PM Meeting)	11/7/14
Washburn University meeting (face-to-face, at Washburn Tech)	11/20/14
Brief project update meeting with PM (telephone) (in place of IR Team/PM Meeting)	11/21/14
TAACCCT National Evaluation Team webinar on Evaluating Partnerships	12/16/14
TAACCCT evaluation webinar	1/7/15
Conference call to discuss upcoming key stakeholder interviews and focus groups	1/27/15
Transformative Change Initiative Learning Lab meeting (Baltimore, MD)	2/17/15-2/18/15
TAACCCT evaluation webinar	3/3/15
Face-to-face meeting with project director (Manhattan, KS)	3/12/15
Conference call about upcoming data collections (advisory board, student surveys)	4/20/15
TAACCCT evaluation webinar (Adapting Evaluation Designs to Reality)	4/21/15
Advisory Board Meeting (Andover, KS)	4/23/15
Meeting with Project Director (SGA questions, intervention status) (telephone)	6/10/15
TAACCCT Convening (Washington, DC)	6/11/15

Butler Community College TAACCCT**OEIE Evaluation Deliverables****10/1/13 to 9/30/17**

Face-to-face meeting with project administrator (El Dorado, KS)	6/25/15
TAACCCT evaluation webinar (Qualitative Methods and Implementation Analysis)	6/30/15
TAACCCT evaluation webinar (Visualization Techniques for Presenting Evaluation Data)	9/22/15
TAACCCT On! Conference (at Washburn University in Topeka)	9/23/15-9/24/15
Project update meeting with PM team (face-to-face, at TAACCCT On!)	9/23/15
Conference call with BCC administrators about Interim Evaluation Report and upcoming data collections (advisory board, student surveys, staff interviews)	11/10/15
TCI Evaluation Collaborative Research Symposium (Evidence of What Works from TAACCCT) (Chicago, IL)	11/10/15
TCI Evaluation Collaborative Meeting (Approaches to Evaluation that Foster Transformative Change) (Chicago, IL)	11/11/15
Conference call with Butler administrators about Interim Evaluation Report and upcoming data collections	2/4/16
Face-to-face meeting with Butler administrators about evaluation timeline and upcoming data collections (El Dorado, KS)	3/23/16
TAACCCT Data Meeting at Washburn University (Topeka, KS)	4/13/16
Conference call with Butler administrator about upcoming data collections and student data	6/22/16
Transformative Change Initiative Meeting (Chicago, IL)	6/22/16-6/23/16
Face-to-face meeting with Butler administrators about TAACCCT student data (El Dorado, KS)	9/8/16
Meeting with TAACCCT staff about student data file (Andover, KS)	10/4/16
Meeting with TAACCCT staff and Workforce Alliance about tracking TAACCCT student employment data (Andover, KS)	10/4/16
Conference call with Butler about Year 4 data collection needs, TAACCCT and control student data needs, and final report	1/11/17
TAACCCT Data Meeting at KBOR (Topeka, KS)	1/12/17
Conference call with Butler to coordinate TAACCCT student survey and interviews	3/13/17
Conference call with Butler about control group data and survey	3/14/17
DOL webinar (Developing Your TAACCCT Final Evaluation Report)	6/1/17
Conference call with KBOR, Butler, and JCCC about approach to TAACCCT performance reporting (employment metrics)	8/14/17
<i>Consultations (Capacity Building/Technical Assistance):</i>	
Shared draft Non-Disclosure Agreement	7/16/14
Shared sample National Aviation Consortium (NAC, Round 2 TAACCCT grantee) student enrollment/intake form	7/16/14
Reviewed and provided feedback on BCC data collection file	8/22/14
Shared information about upcoming TAACCCT On! Conference	9/3/14
Shared sample National Aviation Consortium (NAC, Round 2 TAACCCT grantee) student participant data forms	11/21/14
Reviewed and provided feedback on BCC student forms	11/25/14
Shared NAC Guilford Tech Community College (GTCC) student follow-up survey and GTCC contact information	11/25/14

Butler Community College TAACCCT**OEIE Evaluation Deliverables****10/1/13 to 9/30/17**

Reviewed and provided feedback on BCC student forms	12/8/14
Shared <i>ETA Technical Assistance Resource: Trade Adjustment Assistance Community College and Career Training (TAACCCT) Guidelines for Reporting Documentation and the Clarification of Definition of Eligible Veteran and Eligible Spouse in the TAACCCT Reporting Package</i> letter sent to TAACCCT grantees 7/2/14	12/8/14
Provided interview scheduling template	1/30/15
Shared BCC TAACCCT logic model with faculty participating in focus group	4/7/15
Shared BCC TAACCCT logic model with administrators participating in focus group	5/11/15
Shared resource gained at the TAACCCT Convening with Project Director	6/22/15
Shared instructions for submitting Interim Evaluation Report to DOL	10/26/15
Shared requested emails from previous TAACCCT Director about IT Institute program sheets	11/24/15
Shared requested email sent to previous TAACCCT Director about student follow up (contained draft online survey BCC could use to follow up with students quarterly, and a survey used by a Round 2 grant for student follow up)	11/24/15
Shared list of non-functioning student email addresses, and potential corrections	4/14/16
Provided feedback on student data file	9/29/16
Provided suggestions for data to request from Workforce Alliance	9/29/16
Shared Compilation of TAACCCT FAQs (dated August 25, 2016)	9/29/16
Discussed ideas for organizing and populating student data file (in person)	10/4/16
Discussed requirements for reporting employment metrics (B8, B9, B10) and types of data that could be provided through Workforce Alliance (in person)	10/4/16
Shared input related to counting credit hours toward metric B5 (email)	10/5/16
Shared information about the online TAACCCT Community of Learning (email)	10/5/16
Discussed ideas related to a process for gathering student credit hour data (phone)	10/6/16
Provided clarification on reporting for metric B3 (email)	11/9/16
Discussed ideas related to a process for obtaining student employment data from the Workforce Alliance (phone)	11/30/16
Shared feedback on reporting outcome data (phone)	1/6/17
Shared guidance on approach for sharing student data	1/11/17
Shared feedback on reporting outcome data (phone)	1/24/17
Shared feedback on reporting outcome data	1/26/17
Clarified intent of survey for IT faculty	2/22/17
Shared information summary about the control group and comparison study from the detailed evaluation plan	2/28/17
Clarified intent of survey for CTE students	3/10/17
Shared discussion points regarding coordination of the TAACCCT student survey and the interviews with TAACCCT grant staff, administrators, and partners	3/10/17
Shared materials regarding the control group and outcomes study	3/13/17
Identified TAACCCT students' email addresses that are in need of updating	3/30/17
Sent sample language for survey announcement for IT and CTE faculty	4/5/17
Discussed student data tracking for TAACCCT and control groups and final performance reporting requirements (phone)	4/5/17
Shared information on final performance reporting (email)	4/6/17

Butler Community College TAACCCT**OEIE Evaluation Deliverables****10/1/13 to 9/30/17**

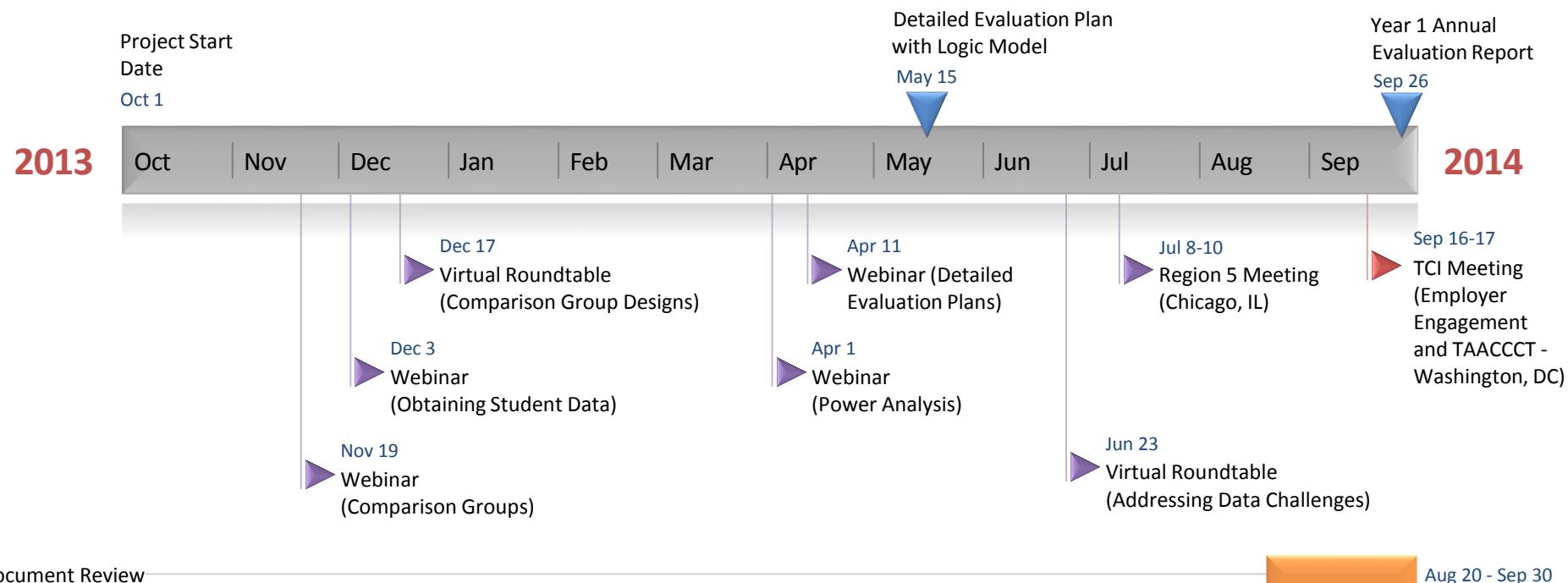
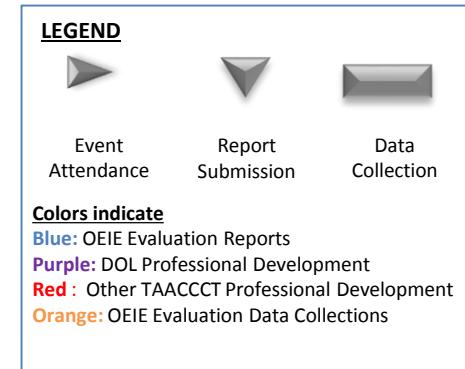
Sent sample language for survey announcement for IT and CTE faculty	4/10/17
Discussed student data tracking for TAACCCT and who can be counted as a TAACCCT student (phone)	4/12/17
Shared feedback related to who can be counted as TAACCCT students (email)	4/12/17
Shared feedback on Workforce data file (email)	4/12/17
Shared information from TAACCCT National Evaluation Team on tracking employment metrics (email)	4/21/17
Shared information on final performance reporting (email)	4/21/17
Sent list of TAACCCT students receiving survey vs. bounced back as undeliverable	4/27/17
Sent update on how removal of students from TAACCCT and control groups affects student survey responses	6/8/17
Shared feedback on control group metric data file (email)	6/8/17
Shared feedback on tracking performance employment metrics and sent TAACCCT TA Guide for Reporting Documentation dated June 29, 2016 (phone and email)	7/12/17
Shared feedback on tracking performance metrics and sent performance TA resource 5 that indicates the cutoffs for tracking student metrics (email)	7/14/17
Shared feedback on tracking employment metrics for control students (email)	8/7/17
Shared feedback on tracking employment metrics for TAACCCT students (email)	8/8/17
Discussed student tracking spreadsheet and performance reporting (phone and email)	8/23/17
Discussed student tracking spreadsheet and performance reporting (email)	8/28/17

Appendix 4

Evaluation Timelines
– Years 1 - 4

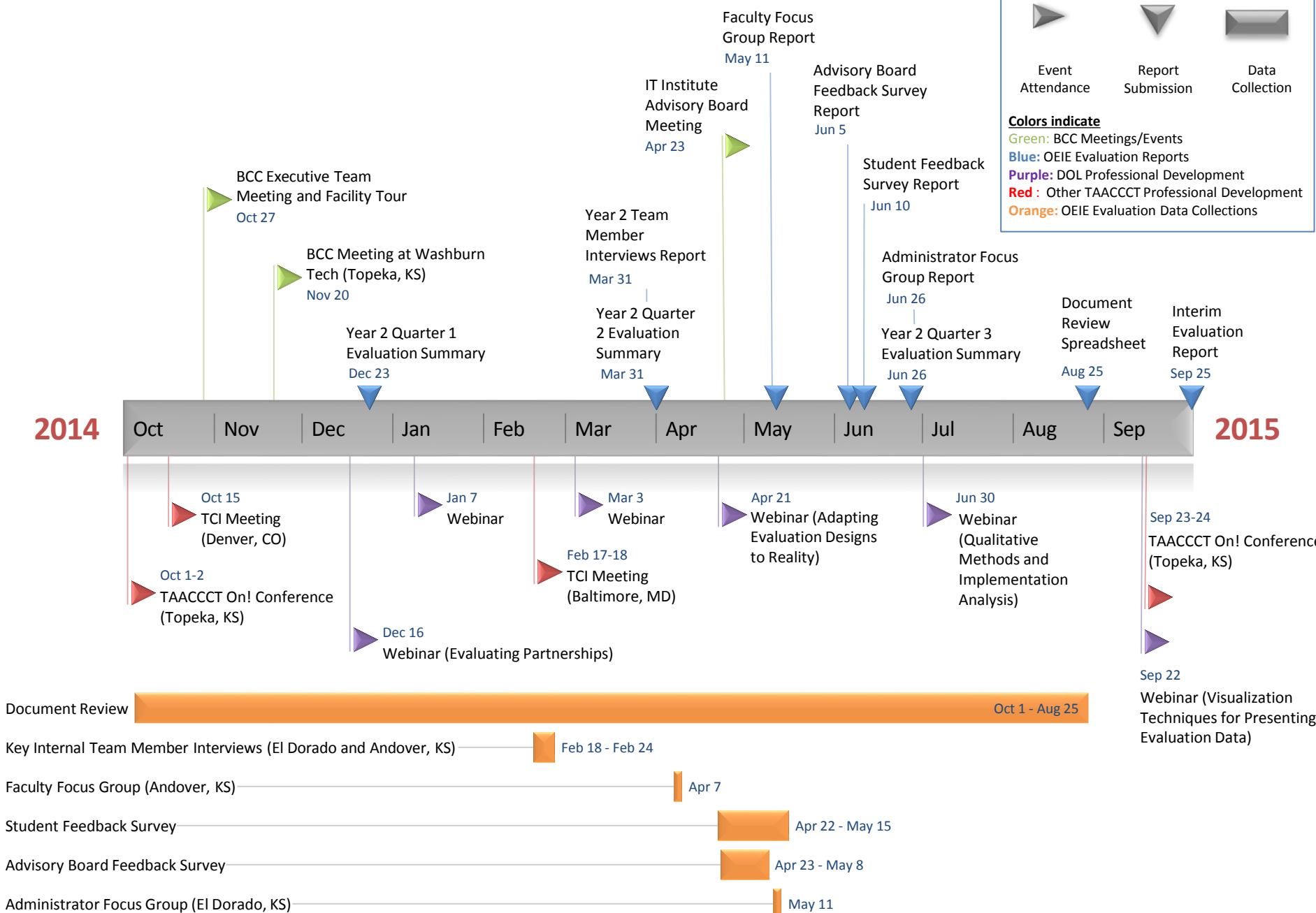
Butler Community College TAACCCT Year 1 Evaluation Activities

Events, Data Collections, and Reports



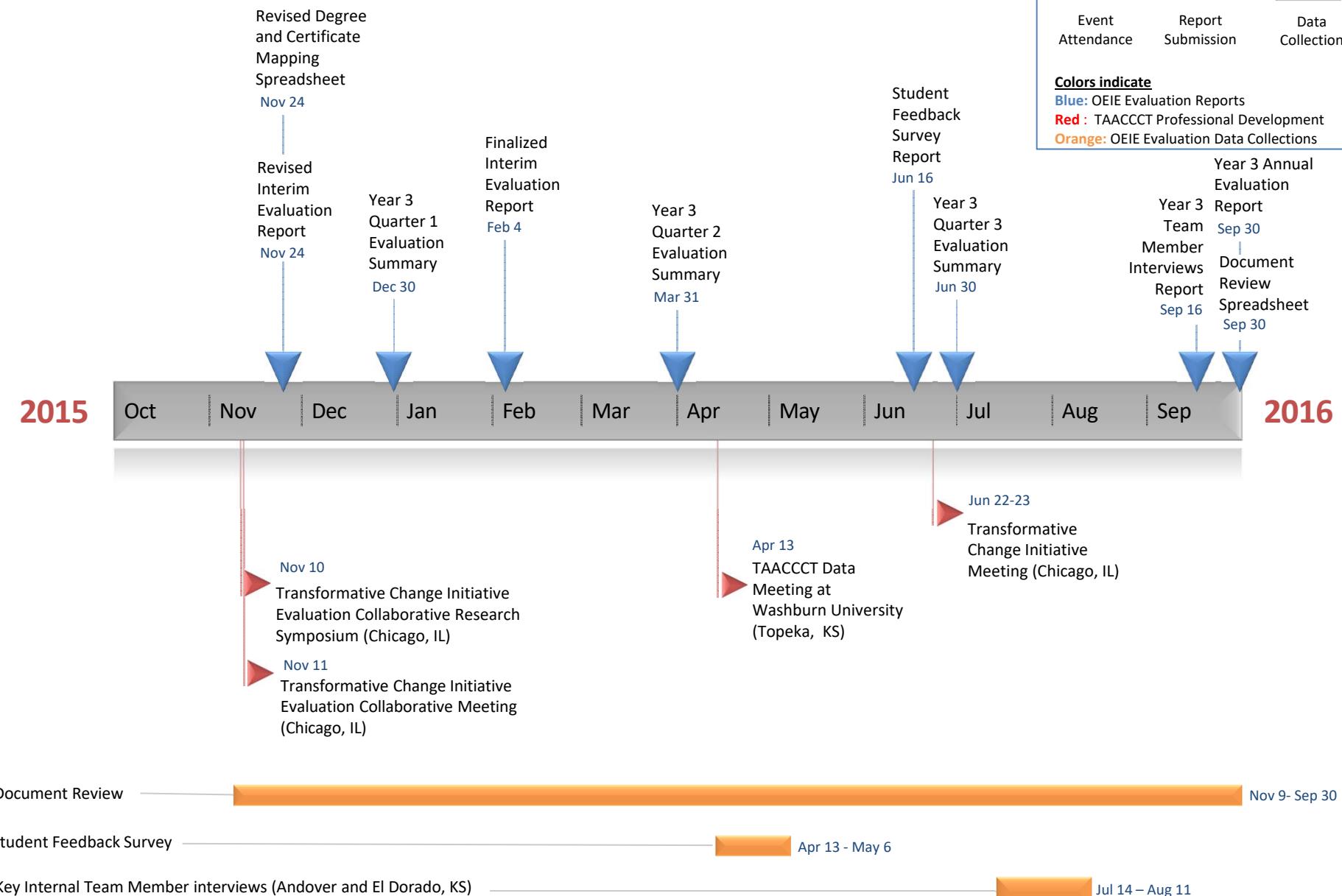
Butler Community College TAACCCT Year 2 Evaluation Activities

Events, Data Collections, and Reports



Butler Community College TAACCCT Year 3 Evaluation Activities

Events, Data Collections, and Reports



Butler Community College TAACCCT Year 4 Evaluation Activities

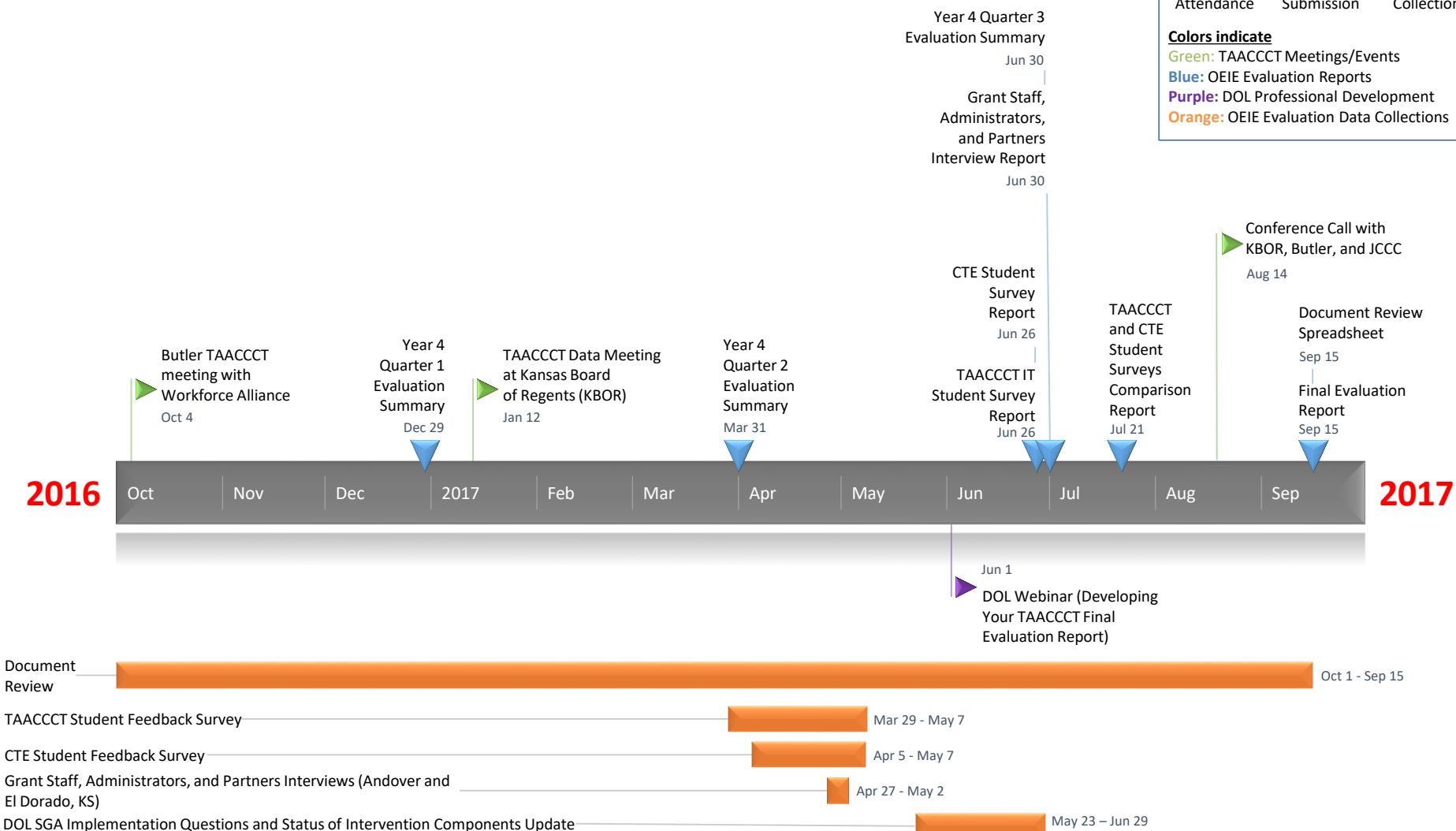
Events, Data Collections, and Reports

LEGEND



Colors indicate

Green: TAACCCT Meetings/Events
Blue: OEIE Evaluation Reports
Purple: DOL Professional Development
Orange: OEIE Evaluation Data Collections



Appendix 5

Sample Items from Evaluation
Instruments

Butler Community College TAACCCT
Sample Evaluation Questions

Grant Team Questions

- 1) In one or two sentences, what are your primary roles related to the TAACCCT project?
- 2) What is your role related to communicating key information (purpose, expected outcomes/impacts, etc.) about the TAACCCT project internally at Butler (administration, faculty, staff, students) and externally (employers, workforce/community partners, potential students)?
 - a. Who do you receive information from?
 - b. Who do you share information with?
- 3) Are the current communication strategies sufficient for keeping team members/stakeholders informed and moving forward with project implementation? If not: What changes are needed?
- 4) Considering your role on the project, please describe strategies/efforts you are pursuing for TAACCCT project implementation, to ensure the project progresses toward grant-related goals/requirements. (This could include any strategies you have used to alter the course of project implementation, when necessary.)
- 5) Have you found any specific strategies for project implementation particularly effective? (What are your lessons learned at this point in the project?)
- 6) Where do you look to gain support for project decision-making and/or implementation? (Who are valuable collaborators/resources?)
- 7) From your perspective, does the project management team have sufficient resources/supports available for project implementation? If not: What additional support/professional development is needed? What support is missing that would help with project implementation?
- 8) Please provide any comments you may have about the collaboration related to TAACCCT, including:
 - a. Internally - within the TAACCCT team and within Butler
 - i. To what extent is there collaboration across instructional departments for TAACCCT?
 - ii. Have any operational efficiencies been achieved through the TAACCCT project?
 - b. Externally - with other organizations
- 9) What have been external partners' (e.g., workforce system, industry/employer partners) greatest contributions for the TAACCCT project? (What contributions have been most critical to the grant's success?)
- 10) What have been Butler internal staff member's (e.g., grant staff/administrators, staff/administrators in supporting offices) greatest contributions for the project? (What contributions have been most critical to the grant's success?)
- 11) What vision and values have guided Butler's innovations for the TAACCCT project?
- 12) In what ways has the TAACCCT program leveraged resources to improve student outcomes? *Consider ways resources were leveraged internally at Butler and/or with external partners.*
- 13) Considering your expectations when you started working on this project, describe any unanticipated experiences, positive or negative, you have had related to this project. (Has anything surprised you?)
- 14) Describe any suggestions you have for improvements (e.g., overcoming challenges) related to the implementation of this project (this could include any additional assistance you need).
- 15) In what ways have the changes made to the organization/structure of the TAACCCT team helped? (Consider its effects on communication, team dynamics, clarity about the project, etc.)
- 16) Please describe the primary ways Butler conducts recruitment/outreach to attract students to the IT programs.
- 17) Please describe the TAACCCT program administrative structure, including the steps/processes related to student intake, provision of student services, and student follow up for the IT programs.

- 18) What TAACCCT components are most helpful to students (contribute the most to success/completion)?
- 19) What have been the most significant outcomes or greatest impacts of the TAACCCT project (for the college, for students, for faculty, for partners)?
- 20) What have been 1 or 2 of the project's greatest strengths, and 1 or 2 of its greatest challenges?
- 21) To what extent do you think having the TAACCCT grant increased the college's capacity to meet industry, TAA, and other workers' educational needs? (Has it or not, please explain)
- 22) To what extent do you think having the TAACCCT grant improved the college's relationships with regional employers, or enhanced the college's visibility in workforce development? (Has it or not, please explain)
- 23) To what extent do you think having the TAACCCT grant influenced the college's operations/structure for IT training (compared to non-TAACCCT technical training areas)? (Has it or not, please explain)
 - a. How have IT program operations/structure changed (e.g., related to career pathways, academic instruction, and student support services)?
 - b. What collaboration occurs across instructional departments for TAACCCT, and/or what operational efficiencies were achieved through the TAACCCT project? (Within IT? Beyond IT?)
- 24) Describe any unanticipated outcomes, positive or negative, you have had related to this TAACCCT project. (Has anything surprised you?)
- 25) To what extent do you think the TAACCCT grant has enhanced the prestige of the college? (Has it or not, explain)
- 26) To what extent do you think the TAACCCT grant has helped make the college more competitive with other institutions of higher education in the area? (Has it or not, explain)
- 27) Looking back at your expectations when the TAACCCT project started, to what extent have those been met (in what ways were they or not, why)? *Consider expectations you may have had related to students, staff, the college, your partners (employers, community, etc.).*
- 28) If you were starting the project over today:
 - a. What two or three things would you implement differently? (Consider: What changes do you think would better contribute to success of the grant at Butler? What would be more helpful to students for achieving success – completion/employment?)
 - b. What two or three things would you keep the same? (Consider: What aspects have been most critical to success of the grant at Butler?)
- 29) What have been the biggest lessons learned about implementing the TAACCCT project?
 - a. In what ways will experiences with the TAACCCT project influence how Butler (or you) will approach future projects, grants, or innovations (e.g., things to do or avoid)?
- 30) What will happen with the initiative at Butler after the grant ends? What does the future hold?
 - a. What factors affect and guide ongoing innovation for the project? (What factors determine whether project components will be continued/sustained?)
 - b. Which components (e.g., positions, activities, partnerships) will continue, and which will expand to non-IT divisions?
 - c. Do you have any lessons learned that may be key to sustainability?

Internal Partner Questions (Administrators, Faculty, and Advising Staff)

- 1) Please describe your involvement in the project, including when you got involved.
- 2) Describe your communication strategies *internally* in the college (e.g., project management team, advisors, instructors, administrators, etc.) and *externally* (e.g., vendors, employers). (For example, with whom do you communicate, with what frequency, about what topics, and using what modes?) Specify any that are Butler Community College TAACCCT-specific communication strategies.
- 3) Are the current communication strategies sufficient for keeping team members/stakeholders informed and moving forward with project implementation? If not: What changes are needed?
- 4) Please describe strategies/efforts you are pursuing for TAACCCT project implementation, to advance project goals. (Are any of these new strategies/efforts specific to TAACCCT project implementation that are different than those used prior to the TAACCCT project?)
- 5) Have you found any specific strategies for project implementation particularly effective? (What are your lessons learned at this point in the project?)
- 6) Overall, how satisfied are you with your experiences related to the TAACCCT grant?
 - a. Do you receive sufficient communication about the grant? (Please explain)
 - b. Do you have sufficient resources to provide support for the grant? (Please explain)
 - c. Are TAACCCT processes for working with your office streamlined/efficient? (Please explain)
- 7) What aspects of your involvement with the TAACCCT grant have you liked best or considered most valuable?
- 8) What challenges have you experienced related to the TAACCCT grant?
 - a. What suggestions do you have for overcoming any current/unresolved challenges?
- 9) Considering the resources available to support the colleges' efforts at *program deployment* and *employer engagement*, from your perspective, does your college's team have sufficient resources/supports available for project implementation? If not: What additional support/professional development is needed? What support is missing that would help your college with project implementation?
- 10) Please provide any additional comments you may have about the collaboration within your institution and/or between your institution and the other organizations for Butler Community College TAACCCT project implementation.
- 11) Where do you look to gain support for project implementation? (Who are valuable collaborators/resources? Who are the local champions?)
- 12) In what ways have aspects of your work changed as a result of involvement with the TAACCCT project? Are there things you do differently, do more of, or do less of related to:
 - a. Your interactions with Butler students?
 - b. Your interactions with other individuals or groups within Butler?
 - c. Your interactions with other individuals or groups outside of Butler?
 - d. Awarding credit for prior learning/experience (PLA)?
- 13) Do these changes apply to the TAACCCT (IT) programs only, or have changes been more broadly adopted for other programs/divisions across the college?
- 14) What vision and values have guided Butler's innovations for the TAACCCT project?
- 15) What have been 1 or 2 of the project's greatest strengths, and 1 or 2 of its greatest challenges?
- 16) What have been external partners' (e.g., workforce system, industry/employer partners) greatest contributions for the TAACCCT project? (What contributions have been most critical to the grant's success?)
- 17) In what ways has the TAACCCT program leveraged resources to improve student outcomes? Consider ways resources were leveraged internally at Butler and/or with external partners.

- 18) What have been the most significant outcomes or greatest impacts of the TAACCCT project for the college?
- 19) To what extent do you think having the TAACCCT grant has:
- increased the college's capacity to meet industry, TAA, and other workers' educational needs? (Has it or not, please explain)
 - improved the college's relationships with regional employers, or enhanced the college's visibility in workforce development? (Has it or not, please explain)
 - influenced the college's operations/structure for IT training (compared to non-TAACCCT technical training areas)? (Has it or not, please explain)
- 20) Considering your expectations when you started working on this project, describe any unanticipated experiences, positive or negative, you are having related to this project (these could be related to employer engagement, program deployment, or any other aspects of the project).
- 21) Describe any suggestions you have for improvements (overcoming challenges) related to the implementation of this project (this could include any additional assistance you need).
- 22) What have been the biggest lessons learned about implementing the TAACCCT project?
- In what ways will experiences with the TAACCCT project influence how Butler (or you) will approach future projects, grants, or innovations (e.g., things to do or avoid)?
- 23) What will happen with the initiative at Butler after the grant ends? What does the future hold?
- What factors affect and guide ongoing innovation for the project? (What factors determine whether project components will be continued/sustained?)
 - Which components (e.g., positions, activities, partnerships) will continue, and which will expand to non-IT divisions?

Student Questions

- 1) Why did you choose to enroll in the Butler IT program?
- 2) Please indicate your educational goal(s) when you started the Butler IT program? (Select all that apply)
 - No goal
 - Gain enough training to obtain employment
 - Retraining or advancement within current employment
 - Obtain a technical certificate (less than 2 years)
 - Obtain a 2-year degree
 - Eventually obtain a 4-year degree
- 3) Butler offers a variety of IT programs, including 8 AAS degrees and 18 certificates.
 - a. Please indicate a status for each Butler IT AAS degree program (whether you are working on the programs or have already completed them). If you have never been involved with a program, please select "Not Applicable".
 - b. Please indicate a status for each Butler IT certificate program (whether you are working on the programs or have already completed them). If you have never been involved with a program, please select "Not Applicable".
- 4) What is your current employment status?
 - Employed full-time in an industry that is relevant to my program of study.
 - Employed part-time in an industry that is relevant to my program of study.
 - Employed full-time in an industry that is not relevant to my program of study.
 - Employed part-time in an industry that is not relevant to my program of study.
 - Not currently employed.
 - Other: (please describe)

- 5) Did you complete your program or degree before leaving Butler?
- 6) Are you currently enrolled in a different college or university?
- 7) Did you have experience working in an industry that is relevant to your program of study before enrolling in the Butler IT program?
- 8) Which of these new features of the Butler IT programs was explained to you in the advising process? (Select all that apply.)
 - Availability of academic support services specifically for IT students (i.e., an academic success coach)
 - Availability of multiple class formats (traditional classroom, online, and blended)
 - Core curriculum is shared between different IT programs (making it easier to change programs or complete additional programs)
 - Ability to earn short-term certificates of completion (without continuing to complete AAS degree)
 - Stackable credentials (shorter-term programs built into longer-term programs)
 - Multiple exit points from IT programs (short-term certificate or longer-term degree options)
 - Multiple career pathways (latticed credentials)
- 9) Please rate your overall satisfaction with the Butler IT program. [Likert scale from Very Dissatisfied = 1 to Very Satisfied = 5]
- 10) Please rate your level of agreement with the following statements: [Likert Scale from Strongly Disagree = 1 to Strongly Agree = 5]
 - The program provides content that is relevant to the current industry.
 - The program provides experiences that are relevant to the current industry.
 - The program offers course options that meet scheduling needs.
 - The program offers course options that meet learning needs and goals.
 - The route to a technical certificate is clear within the program.
 - The route to a career/employment is clear within the program.
 - The program is well worth the time required.
 - The program is interesting.
 - I would recommend the program to a friend or coworker.
- 11) Please rate your level of agreement with the following statements about Butler IT program expected outcomes/impacts: [Likert Scale from Strongly Disagree = 1 to Strongly Agree = 5]
 - The program increased my technical knowledge.
 - The program increased my technical skills.
 - The program increased my "soft" skills (e.g., teamwork, communication, problem solving).
 - The program prepares students for high demand jobs in the industry.
 - The program assists students with completing the program (through academic support services).
 - The program assists students with obtaining a job (through employment support services).
 - The program assists students with gaining credit for prior learning/experience.

12) Please rate your level of agreement with the following statements about Butler IT faculty/ instructors.

Butler IT faculty/instructors... [Likert Scale from Strongly Disagree = 1 to Strongly Agree = 5]

- Communicate clearly about important course topics.
- Are helpful in guiding me to understand course topics in ways that clarify my thinking.
- Are up-to-date on their knowledge of the industry.
- Make connections between course topics and their relevance to the industry.
- Allow time in class for discussion/interaction.
- Are willing to meet with students outside of class (to answer questions, provide guidance).
- Tell students about Butler services that are available to students.
- Let students know about potential work opportunities.
- Talk about multiple career pathways available through Butler.
- Share information about courses that are available through other Butler programs.
- Provide guidance or direction on Butler programs and certificates.
- Promote a respectful classroom environment.

13) Please rate your level of agreement with the following statements about your Butler IT class experience. Butler IT classes... [Likert Scale from Strongly Disagree = 1 to Strongly Agree = 5]

- Provide adequate hardware/equipment to meet learning objectives.
- Provide adequate software to meet learning objectives.
- Provide adequate space to facilitate learning.
- Arrange the space in a way that facilitates learning.
- Arrange the space in a way that facilitates interaction.

14) Which of the following class formats did you experience during the Butler IT program? (Select all that apply.)

- Traditional face-to-face (all parts of the class were in a classroom)
- Online (all parts of the class were online)
- Blended (some parts of the class were online, and some were in the classroom)

15) For each of the following student services available to Butler students, indicate if you used it while in the training program, and if you think it is helpful for gaining employment.

- | | |
|---|---|
| <ul style="list-style-type: none">• Job search assistance (job board)• Resume/interview preparation• Career Coach website | <ul style="list-style-type: none">• Tutoring• Internship notifications• Other: please specify |
|---|---|

16) How have the services helped or impacted you?

17) Have you had any interactions with industry employers while in the Butler IT program?

18) Please select the interaction(s) you had with industry employers while in the Butler IT program. (Select all that apply.)

- I visited employer organization(s) by myself
- I visited employer organization(s) in a student group
- Employer(s) visited class (e.g., to give a presentation)
- Employer(s) visited school (e.g., for a job fair, etc.)
- I interviewed with employer(s) for internship or regular job position(s)
- I worked for an employer at an internship
- I worked for an employer at a regular part-time position
- I worked for an employer at a regular full-time position
- Other (please describe)

19) Please describe the impacts of interacting with employers during the Butler IT program.

- 20) Did you have any unanticipated outcomes or experiences, either positive or negative, related to your participation in the IT program? (Did you experience anything that you were not expecting or that surprised you?) Please describe.
- 21) What do you believe are the best components of the Butler IT program? (What components most helped you be successful in the program?)
- 22) What else does Butler need to do to make the IT program more successful? (For example, what should Butler improve, or what should Butler remove? How could Butler better meet your needs?)
- 23) What have been the overall impacts for you of enrolling in the Butler IT program?

External Partner Questions (Employer, Workforce, and Advisory Board)

- 1) How would you describe your role on the Butler TAACCCT project?
- 2) What do you believe is the greatest value of your participation in the Butler TAACCCT Advisory Committee?
- 3) What types of activities have you (or your organization) engaged in to advance the Butler TAACCCT project goals?
- 4) What specific outcome(s) do you hope will be achieved in the next two years of the grant?
- 5) What specific challenge(s) do you think Butler may have to overcome related to implementing the TAACCCT project?
- 6) What ideas or suggestions do you have to potentially address these challenge(s)?
- 7) Please indicate your level of agreement with each of the following statements. If you do not have enough information to respond to the item, please select "Do Not Know": [Likert scale from Strongly Disagree = 1 to Strongly Agree = 5]
 - The curriculum is relevant for today's industry.
 - The project is positioned to meet the employment needs of area employers.
 - There is adequate market demand to support the employment of the project's graduates.
 - The project is marketed and promoted effectively.
 - The project's *facilities* are adequate to meet program and project objectives.
 - The project's *equipment* is adequate to meet program and project objectives.
 - Graduates from this project will possess the knowledge, skills, and abilities for an entry-level position.
 - The technical skills taught in the programs meet industry standards.
- 8) Please describe what your business/organization does, including which Butler IT programs are relevant.
- 9) Please describe your involvement with Butler's IT programs before the TAACCCT grant. (For example, how long have you been a partner with Butler, and what Butler activities were you involved with before TAACCCT?) *Note: The Butler TAACCCT project began in October 2013.*

10) Please describe your involvement with Butler's TAACCCT program, including:

- a. How long have you been a partner on Butler's TAACCCT program?
- b. What activities have you been involved with for TAACCCT? Some to consider:

- | | |
|--|---|
| <ul style="list-style-type: none">• Recruiting students to Butler IT• Giving class presentations• Participating in job fairs• Sharing job openings• Interviewing IT students• Hiring IT program completers• Participating in advisory board meetings | <ul style="list-style-type: none">• Assisting with curriculum development/reviews• Providing feedback on industry needs• Donating equipment, materials, or supplies• Promoting Butler IT programs in the community• Providing internship/training opportunities |
|--|---|

11) Please describe any impacts on your organization due to your partnership with Butler related to the TAACCCT project. Some to consider:

- Access to a broader pool of recruiting
- Reduced recruiting costs for entry-level positions
- Decreased on-the-job training time/cost
- Improved employee retention/reduced turnover
- Access to training or upgrading skills for current workforce

12) Based on your experience, what are strengths of Butler TAACCCT/IT students? (In what ways do they meet your needs as an employer?)

13) What, if any, qualities or skills did you expect Butler TAACCCT/IT students to possess upon employment that they did not? (In what ways do they NOT meet your needs?)

14) Please describe any ways your relationship with Butler has changed due to the TAACCCT project (is there anything different about the way your organization and Butler work together?)

- a. Now that the grant is coming to an end, how would you like the relationship to move forward?

15) If the TAACCCT project started over today, is there anything you would do differently? Consider: Are there ways to:

- a. improve program/course content
- b. strengthen relationships
- c. enhance career pathways into the IT workforce
- d. increase the success/impact of the project in general or for your organization

16) Do you have any advice for Butler as they move forward with IT program innovations after funding for the TAACCCT grant ends (e.g., components to sustain, new things to try)?

Appendix 6

Butler TAACCCT Infographic



Butler

Community College

Department of Labor (DOL) Trade Adjustment Assistance
Community College and Career Training (TAACCCT) grant

The project aims to increase the education and skill attainment of TAA-eligible, veterans, and other dislocated workers for employment in the information technology industry. Industry credentials can be attained in a short period of time, and recipients can enter the job market ready to work.

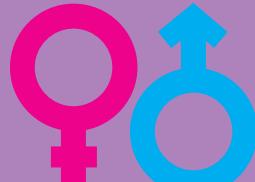


Average
Age
26

Demographic Snapshot



657
Students served



165 492
Gender Distribution



Incumbent
Workers served
225

58
Veterans
served

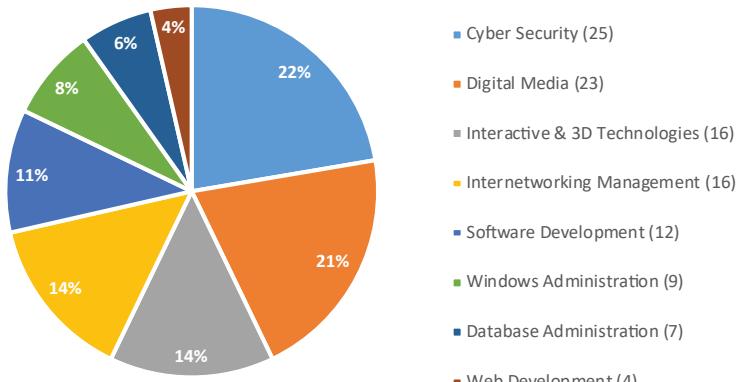


15
Students Gained
Employment after
Program Completion

Average Wage
Increase
\$3.68

Program Completion Snapshot

112 Butler Degrees Completed



171 Certificates Completed

- 53 BCC MCSA Windows 8 (6 hr)
- 29 BCC MCSA Windows Server 2012 (9 hr)
- 26 Networking I (12 hr)
- 14 3D Graphic Specialist (9 hr)
- 10 Game Designer (15 hr)
- 9 Digital Photography (12 hr)
- 8 Basic Programming (9 hr)
- 8 Cyber Security (30 hr)
- 6 BCC MCSA SQL Server (9 hr)
- 3 BCC MCSE Server Infrastructure (15 hr)
- 3 Digital Media Specialist (33 hr)
- 2 Game Programming (15 hr)
- 0 Advanced Programming (15 hr)
- 0 Signage Specialist (9 hr)
- 0 Web Designer (15 hr)
- 0 Web Developer (15 hr)