

RESEARCH REPORT

The Trade Adjustment Assistance Community College and Career Training Grant Program:

Implementation of the Rounds 1 and 2 Grants

December 2019



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Glossary of Key Terms and Acronyms

ABE: adult basic education; pre-college, noncredit instruction in reading, writing, mathematics, and English language skills, to help adult learners obtain a high school equivalency credential or enroll in postsecondary education.

accelerated learning strategies: Strategies that reduce adult learners' time to completing a program of study by: 1) redesigning curriculum, credentials, and programs to help students move through coursework more quickly and earn credentials as they progress through programs; 2) aligning college enrollment, credit award, and other college policies; and using technology and course scheduling to support learning for working students or students with families. Examples include online and hybrid courses, stacked credentials, and prior learning assessments.

ACCUPLACER®: An integrated system of computer-adaptive assessments designed to evaluate participants' skills in reading, writing, and mathematics.

ACT: American College Test; a standardized test used for college admissions in the US; comparable to the SAT.

American Job Center: Formerly known as One-Stop Career Center; a local center that provides a full range of assistance such as federally-funded job search assistance and training referrals, to job seekers.

apprenticeship: An arrangement that includes a paid-work component and an educational or instructional component, wherein an individual obtains workplace-relevant knowledge and skills; also see *registered apprenticeship*.

articulation agreement: A formal agreement between two institutions of higher education, such as a community college and a four-year university, that allows students to enroll in a more advanced program of study and transfer credit for coursework completed at the institution from where the student is transferring.

assessment technology: Software or online programs that assess the academic or technical skills, interest in occupation, or need for personal support.

asynchronistic scheduling: Classes scheduled and organized so that students can complete coursework on their own time. Students usually must connect or contribute to the class one or twice per week.

BEST: Balance Evaluation Systems Test; tests used to measure reading and writing skills to determine proficiency in oral and written English.

career coaching and counseling: guidance and support provided by advisers and counselors on selection of program that aligns with their career interests, job search assistance, job readiness skills, and job retention services.

career pathways: Approaches to workforce development that offer an articulated sequence of education and training programs focused on an industry sector, combined with support services, to enable individuals to enter and exit at various levels and to advance over time to higher skills, recognized credentials, and better jobs with higher pay.

CASAS: Comprehensive Adult Student Assessment Systems; a widely-used system for assessing adult basic reading, math, listening, writing, and speaking skills.

CDL: commercial driver's license.

CEO: US Department of Labor's Chief Evaluation Office.

clinical placement: A work-based learning experience for students where they work in a health care setting to gain practical experience in their occupation; also known as clinicals or preceptorships.

CNA: certified nursing assistant.

CNC: computer numerical control; automated machine tools controlled by computers that execute a preprogrammed sequence of commands that operate the machinery.

college persistence and completion strategies: Strategies that support adult learners' enrollment, progress, and completion of programs of study by: 1) providing academic and nonacademic support services; 2) redesigning developmental and adult education programming for students who are underprepared for college; and 3) helping students easily transfer to more advanced programs of study and applying credits that they have already earned to persist in postsecondary education. Examples include enhanced student support services and articulation and transfer agreements.

COMPASS: An untimed computerized test that helps colleges evaluate individuals' skills and place individuals into the appropriate courses; tests include reading, writing, math, essay writing, and English language acquisition.

competency-based education/learning: Programs of study based on competency models that identify the knowledge, skills, and abilities necessary to successfully perform critical work functions in an industry or occupation.

connections to employment strategies: Strategies that connect adult learners to the workforce by: 1) developing curriculum to help students learn technical skills through on-the-job and simulated work experiences; 2) preparing students for the workforce by providing guidance on career options, building job readiness skills, and helping support job search activities; and 3) building partnerships with employers, industry associations, the public workforce system, and other organizations to support successful transitions to the workforce. Examples include partnerships with employers and public workforce system organizations, career coaches and navigators, and work-based learning.

contextualized instruction: Instruction that embeds learning related to traditional educational subjects into technical coursework (e.g., blending math instruction as it is needed into a classroom and laboratory instruction in precision machining).

cooperative education: A college program that combines classroom-based education with practical work experience; provides academic credit for structured job experience.

credit for work experience: Awarding of credit for a student's work experience that demonstrates mastery of competency or skills for a program of study.

developmental education: College courses in math and English provided to academically underprepared students so they can be successful in college-level courses.

DOL: US Department of Labor.

enhanced academic support: Assistance is provided outside the classroom to ensure students learn skills; may take the form of personalized instruction or digital tutoring.

FAFSA: Free Application for Federal Student Aid; a form that can be prepared annually by current and prospective college students (both undergraduate and graduate) to determine their eligibility for financial aid.

hybrid learning: Instruction is delivered both online and in the classroom.

I-BEST: Integrated Basic Education and Skills Training; learning model developed by the Washington State Board for Community and Technical Colleges that uses a team-teaching approach to simultaneously provide job training and basic skills in reading, math, or English language.

Individual Training Account: a voucher used by Workforce Innovation and Opportunity Act participants to pay for training from a state-approved programs and providers.

industrial machinery mechanics: Workers that repair, install, adjust, or maintain industrial production and processing machinery or refinery and pipeline distribution systems.

industry mentor: Employee of a firm within a specific industry who helps students learn more about their occupation of training and provides guidance on finding employment in their occupation of training.

industry-recognized credential: A credential that is developed, offered, or endorsed by a nationally recognized industry association or organization representing a sizeable portion of an industry sector, or a credential that is sought or accepted by companies within the industry sector for purposes of hiring or recruitment. This could be an educational or training certificate awarded by a training provider or a certification awarded by a third-party organization such as an industry association.

internship: A work-based learning experience where students work at a firm or organization to gain practical experience in the workplace, either with or without pay.

job readiness skills: A set of skills and behaviors that are necessary for any job, such as social competence and job-seeking and interview skills; also referred to as “soft skills” or “work readiness skills.”

job shadowing: A career awareness/exploration opportunity in which a student observes or “shadows” a worker for a designated period to learn about that worker’s career.

lineworker: Workers that install and repair telecommunications cable, including fiber optics.

LPN: licensed practical nurse.

machinists: Workers that set up and operate a variety of machine tools to produce precision parts and instruments; includes precision instrument makers who fabricate, modify, or repair mechanical instruments; may also fabricate and modify parts to make or repair machine tools or maintain industrial machines, applying knowledge of mechanics, mathematics, metal properties, layout, and machining procedures.

modular courses: Courses that are broken down into steps or “chunks” by topic that students can complete at their own pace and make demonstrable progress in learning content; also referred to as modularized learning.

mediated telepresence: Delivery model commonly used for incumbent workers or inmates which allows participants to take classes from home or at their employer’s site where they can speak directly to their instructor.

occupational preparatory class: A course that introduces students to an occupation and provides them with basic knowledge about the occupation; can take the form of a pre-apprenticeship or a boot camp.

online learning: Instruction is delivered on a computer or mobile device.

on-the-job training: Training by an employer that is provided to a paid participant while engaged in productive work in a job that provides knowledge or skills essential to mastering a job and is limited in duration as appropriate to the occupation.

PLA: prior learning assessment, also referred to as credit for prior learning, involves an evaluation of skills and knowledge acquired outside the classroom for the purpose of recognizing competence against a given set of standards, competencies, or learning outcomes.

public workforce system: A network of federal, state, and local offices that function to support economic expansion and develop the talent of the US workforce; also see *workforce development boards* and *American Job Centers*.

real-time online instruction: Instructors and students interact through an online learning platform during a set time.

registered apprenticeship: An apprenticeship that meets federal and state standards and is registered with DOL; also see *apprenticeship*.

RN: registered nurse.

SAT: Scholastic Aptitude Test; a standardized test widely used for college admissions in the US; comparable to the ACT.

self-paced learning: Students complete coursework at their own pace rather than during set classroom times.

simulated learning: Classroom or online instruction that replicates a workplace such as a factory floor or a hospital room, where students practice occupational skills; also called simulation laboratory or “lab.”

SmarterMeasure: A web-based assessment which assesses a learner's readiness for succeeding in an online and/or technology-rich learning program based on noncognitive indicators of success.

solders and brazers: Workers that braze or solder together components to assemble fabricated metal parts, using soldering iron, torch, or welding machine and flux.

stacked and latticed credentials: A credential is considered stackable when it is part of a sequence of credentials that can be accumulated over time to build up an individual's qualifications and help them move along a career pathway; a credential is considered latticed if it connects to multiple career pathways.

Supplemental Nutrition Assistance Program: Federally-funded program that provides food assistance; also called SNAP; formerly known as Food Stamps.

support services: Services such as transportation, childcare, dependent care, housing, and needs-related payments, which are necessary to enable an individual to participate in education and training.

TAA: Trade Adjustment Assistance; a federally funded program that helps US workers who have lost their jobs due to foreign trade obtain the skills, credentials, resources, and support they need to find new employment.

TAACCCT: Trade Adjustment Assistance Community College and Career Training grant program.

TABE: Test of Adult Basic Education; test used by public agencies who are guiding people in adult education programs, such as getting a high school equivalency credential, going to trade schools, etc.; offers tests of skills and aptitudes in reading, math, and English.

team teaching: An instructor of occupational/technical skills and a basic academic skills instructor jointly teach in the classroom.

Temporary Assistance for Needy Families: Federally funded program that provides temporary financial assistance and other supports to pregnant women and families with dependent children.

welders and cutters: Workers that use hand-welding or flame-cutting equipment to weld or join metal components or to fill holes, indentations, or seams of fabricated metal products.

work-study program: A federal program where students with financial need work part-time jobs to help pay for educational expenses; jobs may be community service or related to their program of study.

Workforce Innovation and Opportunity Act of 2014: Federally-funded program that helps job seekers access employment, education, training, and support services to succeed in the labor market and to match employers with the skilled workers they need to compete in the global economy.

workforce development board: Oversight board responsible for overseeing Workforce Innovation and Opportunity Act; also referred to as “local board.”

work-based learning: Education and training strategies that enable participants to gain or enhance their skills while employed or while engaged in an experience similar to employment.

Executive Summary

The Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant program awarded \$1.9 billion to institutions of higher education that offer programs of two years or less, mostly community colleges, to build their capacity to provide workforce education and training to adults in need of new skills for in-demand jobs. The grant program, which ran from 2011 to 2018, was also designed to address other key issues—changing education and workforce systems to be better connected and integrated, more effectively addressing employer needs for skilled workers, and transforming how community colleges deliver education and training to adult learners. This report is part of a series of publications from the TAACCCT national evaluation that spans the four rounds of TAACCCT grants.¹ Focused on the first two rounds, this implementation report summarizes key findings using data collected from a survey of all Rounds 1 and 2 TAACCCT colleges that participated in the grants, totaling 663 colleges, and interviews and focus groups conducted during site visits to 17 Round 2 colleges.

The main question of interest for the study is: *What are the types of emerging ideas for service delivery improvement and/or system reform that seem the most promising for further research?* To address this question, the study describes how the colleges built capacity to provide innovative education and training programs and pathways and supported participants' educational outcomes. The implementation study also examines colleges' progress towards the three main goals of the grant program, highlighting the successes and challenges to date and lessons learned that can be useful to policymakers and practitioners wishing to replicate the approaches.

Background

Congress authorized the grant program as part of the American Recovery and Reinvestment Act of 2009 to increase the capacity of community colleges to meet local and regional labor demand for a skilled workforce. The grants were to target workers eligible

Goals of TAACCCT Grant Program

- 1) better prepare the Trade Adjustment Assistance-eligible workers and other adults for high-wage high-skill employment or reemployment in growth industry sectors by increasing their educational attainment;
 - 2) introduce or replicate innovative and effective methods for designing and delivering instruction that addresses specific industry needs and leads to improved learning, completion, and other education outcomes; and
 - 3) demonstrate improved employment outcomes for TAACCCT participants.
-

¹ All publications from the TAACCCT national evaluation are available on DOL's Chief Evaluation Office website, found at <https://www.dol.gov/agencies/oasp/evaluation/completedstudies>.

for Trade Adjustment Assistance (TAA) and other adults across a state, region, industry sector, or cluster of related industries. The Health Care and Education Reconciliation Act, signed in March 2010, provided the grant program with approximately \$500 million annually over four rounds of grants, from fiscal years 2011–2014.

The US Department of Labor (DOL), which administered the grant program over seven years in partnership with the US Department of Education, awarded 256 three- to four-year grants to college applicants.² The grant program funded colleges in all 50 states, the District of Columbia, and Puerto Rico in each round.³ DOL awarded 49 grants in Round 1 involving 353 colleges and 79 grants in Round 2 involving 310 colleges, which are the focus of this report.⁴ Across four rounds of grants, TAACCCT reached over 60 percent of the nation's publicly-funded community colleges and included at least one college from every US state in each round (Cohen et al. 2017).⁵

The grant announcements for all four rounds emphasized the importance of developing career pathways. *Career pathways approaches* to workforce development offer an articulated sequence of education and training programs focused on an industry sector, combined with support services, to enable individuals to enter and exit at various levels and to advance over time to higher skills, recognized credentials, and better jobs with higher pay.⁶ Core elements of the grants included stacked and latticed credentials, strengthening online and technology-enabled learning, developing transfer and articulation agreements, and using an evidence-based approach to developing the intervention (that is, implementing new or existing strategies that have shown preliminary or past success).⁷ DOL also required increased coordination with key stakeholders in the local and regional workforce system, including governors, employers and industry, the public workforce system, and other organizations that can support sector strategies. DOL increasingly emphasized the importance of strategic alignment among workforce stakeholders and partners, particularly in Rounds 2–4. These core elements were

² The seven years are federal fiscal years, from October 1, 2011, through September 30, 2018.

³ For information on the grants awarded by state, see TAACCCT state profiles at <https://www.doleta.gov/taaccct/state-profiles.cfm>.

⁴ The number of colleges involved in Rounds 1 and 2 grants is a duplicated count of colleges. Colleges could be involved in multiple grants, either as a grantee or a partner in a consortium grant. For more information, see Cohen et al. (2017).

⁵ The total number of community colleges that participated in the TAACCCT grant activities was 598. The percentage is based on the number of community colleges (934) identified by the US Department of Education for the 2013–14 school year. For more information, see Cohen et al. (2017).

⁶ There are many definitions of career pathways in the literature. The definition used for the TAACCCT national evaluation aligns with the definition for the Career Pathways Design Study, which provides a high-level synthesis of the findings from career pathway research and design. See Sarna and Strawn (2018) and Schwartz, Strawn and Sarna (2018) for more information.

⁷ Definitions of these terms and others related to the TAACCCT grants are provided in the glossary.

designed to ensure that the strategies implemented by the TAACCCT colleges would accelerate participants' learning, support their persistence and completion, and help them connect to employment. Lastly, DOL required that grantees participate in national evaluation activities and, for Rounds 2–4, that each grantee sponsor a third-party evaluation to assess the implementation and outcomes of the grant-funded activities.

TAACCCT Implementation Study

The Rounds 1 and 2 Implementation Study is one component of the TAACCCT national evaluation. The national evaluation answers research questions that focus on understanding and assessing the TAACCCT grant program and help inform future community college and workforce investments and policy; a full summary of the national evaluation components is provided below in box ES.1. The implementation study documents and draws lessons from the implementation of grant activities for each of the rounds, as well as across all four rounds.

BOX ES.1

TAACCCT National Evaluation Components and This Report

- An **implementation analysis** (Rounds 1–4) of the service delivery approaches developed and the systems changed through the grants based on a survey of colleges and visits to selected colleges
 - ***The Trade Adjustment Assistance Community College and Career Training Grant Program: Implementation of the Rounds 1 and 2 Grants – Final Report (this report)***
- **Syntheses of third-party evaluation findings** (Rounds 1–4) to draw a national picture of the implementation of the TAACCCT capacity-building strategies and build evidence of the effectiveness of the strategies on participants' education and employment outcomes
- An **outcomes study** of nine Round 4 grantees using survey data and administrative records to better understand the characteristics of TAACCCT participants, their service receipt, and their education and employment outcomes
- A **study of employer relationships** with selected Round 4 employer-partners to better understand employers' perspectives on how to develop and maintain strong relationships with colleges

The implementation study uses two primary sources of data. First, the evaluation team administered an online survey to all Rounds 1 and 2 colleges—663 single-institution grantees, consortium-lead institutions, and consortium-member institutions in total. The survey presents a picture of the colleges and activities that the grants funded at the college level. Second, the team conducted interviews with college staff and partners and focus groups with participants during site

visits to 17 purposively selected colleges to gain an in-depth understanding of the implementation of the local projects from multiple perspectives and to represent a range of grant experiences.

Summary of Findings from the TAACCCT Rounds 1 and 2 Implementation Study

This section summarizes the key implementation findings from the Rounds 1 and 2 colleges, integrating findings from an analysis of data from a survey of the 663 colleges that participated in the grant activities and visits to 17 colleges. It focuses what was learned about designing grant projects to respond to industry needs, recruiting adult learners, using evidence-based design, creating career pathways, building online and technology-enabled learning capacity, and aligning systems through partnerships.

Designing Grant Projects to Respond to Industry Needs

- **In designing their local projects, colleges began by identifying the industries they would focus on for their grant activities—the top three being manufacturing; health care and social assistance; and professional, scientific, and technical services (primarily information technology).** These industries were major employers in their areas so focusing on them could help ensure there would be available jobs for program graduates. Most colleges saw improving local and regional economic conditions over the course of the grant, which may have also helped the job prospects of graduates with needed skills and industry-recognized credentials.
- **At the colleges visited, staff involved in the grant activities used labor market information on job growth to identify employers that were “economic drivers” in their local areas and regions.** Colleges also brought employers and industry to the table to ensure their program designs, curricula, credentials, and training equipment and facilities would help develop the skills employers needed.

Recruiting Adult Learners for TAACCCT Programs of Study

- **Programs of study and other activities funded by the grants reached many individuals in need of new, industry-relevant skills.** The colleges served an average of 398 participants during their grants. An average of 382 participants per college earned credit and an average of 199 had earned a credential of any type. An average of 133 participants retained in their program of study or other grant-funded program; and an average of 38 enrolled in further education and training after program completion. Colleges targeted TAA-eligible workers, a group that many colleges had not targeted previously, but were challenged to identify and recruit significant numbers of them by the time grant projects began recruiting participants.
- **Over three-quarters of the colleges also targeted unemployed and underemployed workers (a particular focus of the colleges visited), veterans, low-income individuals, and adults with low education levels.** All were groups that colleges had not targeted as often before implementing projects.

- **Colleges reached potential participants most often through recruitment materials (e.g., flyers and advertisements), referrals from the public workforce system (a resource highly used by the colleges visited), and from employers and industries sending their employees.** Challenges to recruitment, although not widely experienced by colleges, included individuals not meeting enrollment requirements, conflicts with work demands, and an improving economy. This may have hindered some grantees from meeting their original enrollment goals.

Using Evidence-Based Designs for Serving Adult Learners

- **The range of designs and strategies used by grantees and member colleges reflects both the impetus of the grant announcements as well as the instructional, assessment, and support service models that were gaining attention in the workforce development field nationwide.** Many of these models have shown promise for positive impacts on participant outcomes based on preliminary studies, but few have been evaluated to show strong empirical evidence to support wider use. Thus, the grants presented a valuable opportunity to test these approaches in a variety of settings where they had potential to be evaluated using rigorous methods.
- **Colleges implemented strategies to help participants accelerate their progress through and completion of grant-funded programs.** Colleges most often used stacked and latticed credentials, hybrid learning, and industry-recognized credentials designs as a part of their programming. However, the colleges tested numerous other strategies to support accelerated learning including prior learning assessments.
- **Work-based learning was also a key instructional component for many Rounds 1 and 2 colleges.** Nearly half of the colleges included internships as a part of their local projects. Twenty percent used clinical placements, reflecting a focus on the health care industry and related occupations for education and training programs. Some colleges also used job shadowing, which helped participants learn more about workplace culture and employer expectations for specific jobs. More intensive work-based learning models that have stronger evidence of effectiveness such as on-the-job training, work-study programs, and apprenticeships were less frequently used by colleges than other work-based learning opportunities.
- **Most colleges developed and provided remediation services and other supports.** Career coaching or counseling was by far the most common of these supports, occurring at 70 percent of colleges. Nearly all colleges visited also included career navigators as a key component of their project designs; this was a service that was valued by the participants. Additional common programmatic components included enhanced academic supports, including personalized instruction and tutoring and contextualized learning. Assistance with obtaining student financial aid was also a key component of the local projects and was important for many participants, as tuition was not covered by grant funds. Access to personal supports through colleges and partner organizations for needs such as child care, transportation, and counseling was made available by some colleges or their partner organizations.
- **Colleges packaged multiple evidence-based components into their grant-funded programs of study.** For example, among the 17 colleges visited, five of the projects used the I-BEST model, an approach that combines team teaching, student supports, and industry alignment and is designed to serve individuals with low education levels or basic skills. One of the colleges leading a single-state consortium brought together career pathways, common curricula, competency-based learning, industry alignment, and accelerated, online developmental education based on a model created for the manufacturing industry for all member colleges.

Creating Career Pathways and Stacked and Latticed Credentials

- **Creating career pathways programs became a core part of the TAACCCT grant program for the Round 2 grant announcement, but many of the colleges across both Rounds 1 and Round 2 built out part or all of a career pathway as part of their grant activities.** Nearly half of the colleges reported developing new career pathways programs at their institutions. All Round 2 colleges visited designed and implemented programs that created initial steps on a career pathway, with educational certificates and professional certifications awarded. However, not all colleges implemented career pathways as a part of their activities, although they may have incorporated some components of the model.
- **A common activity of the colleges was developing stacked and latticed credentials, a key element of the career pathways model.** For many of the colleges visited, noncredit certificates were a first step on a pathway. Typically, there were multiple certificates and certifications awarded (e.g., logistics certificate and CDL license) as a part of the career pathways programs. In addition, close to half of the colleges surveyed reported developing articulation agreements between the grant-funded programs of study to more advanced programs within their institution and to programs at four-year institutions.
- **Another key component of building career pathways programs was the involvement of employers and industry representatives in developing curriculum and credentials to ensure pathways reflected occupational requirements.** Nearly half of the colleges reported developing industry-recognized credentials, informed by employer and industry needs. All of the colleges visited partnered with employers who assisted with curriculum design and the creation of industry-recognized credentials.

Building Online and Technology-Enabled Learning Capabilities

- **The grants funded technology that allowed colleges to align programs of study with current occupational requirements in ways that would not have been possible otherwise.** Most colleges used technology to create innovative learning environments for their participants. Hybrid learning, where courses blend in-person and online learning environments, was used by over 60 percent of the colleges surveyed. One of the colleges visited overcame two major challenges its participants were experiencing—living in a rural area far from campus and working while attending school—through an online delivery model that allowed participants to talk directly with instructors online. It was coupled with self-paced learning to fit classes in between work and family schedules. Some of the colleges visited also purchased laptops for their participants' use during enrollment, making participation in the online components of the programs more feasible.
- **Simulations of work settings, especially for manufacturing and health care training programs, were also common enhancements to the technology-enabled learning environments among Rounds 1 and 2 colleges.** Building these simulation facilities was a major grant expenditure. Many project directors and staff interviewed saw the availability of grant funding to purchase equipment and facilities for simulation training as an essential component of project success. Some also noted that having the grant gave them an opportunity to approach employers to support their programs of study as they could present the grant activities as a benefit to employers. Some employers donated equipment for training to ensure that facilities provided state-of-the-art and industry-relevant instruction.

Aligning Systems through Partnerships Within and Outside of TAACCCT Colleges

- **Colleges had to work with many stakeholders within and outside their institutions to make programs of study relevant to industry requirements while enabling working adults and those with families to participate and succeed in college.** Internal stakeholders included college administrators, faculty, and staff, and external stakeholders included employers, industry representatives, the public workforce system, and community-based organizations. Additionally, colleges that were part of a consortium of colleges as a part of the grant had to obtain consensus across member colleges on key elements of the models they implemented, common curriculum to be used across their programs, and institutional policy and practice changes needed to successfully implement programs and other activities.
- **Colleges developed internal partnerships to support newly developed or enhanced courses and instructional design and to help participants enroll in and complete their programs.** These were mostly existing partnerships that colleges enhanced during the grant. Projects brought on current faculty and staff to help implement new curricula or train participants on new equipment and technology. A few of the colleges visited planned to use institutional funding to create permanent positions to sustain grant-funded programs after the grant ended. The project directors and staff also reported working with internal partners to support participants, including academic and financial support, access to personal support services, college and career counseling, and articulation from noncredit to credit-bearing programs.
- **Nearly three-quarters of all colleges involved employers, industry associations, and chambers of commerce in the local grant projects in some way.** As discussed, employer and industry involvement was needed to ensure programs of study were aligned with industry needs. Several colleges had highly engaged employers who provided input into curriculum and development of credentials, provided training equipment, recruited and screened employees for program participation, and hired program graduates. However, in a few cases, there were employers that were supposed to be involved in the grant activities and submitted letters of commitment with grant applications, but the full partnership did not materialize due to shifts in project design or other issues arising during implementation. Another issue was that project directors were not sure that employer partnerships could be sustained after the end of the grant, potentially making it difficult to adapt and align programs as industry standards shift.
- **Another major type of partnership developed by the colleges was with the public workforce system.** Local workforce development boards and American Job Centers served as important referral resource, provided career counseling and assessment services, identified funding for training stipends, and provided job search assistance. All but one of the 17 colleges visited worked with their local public workforce system. At one college, the project director position would be funded by the American Job Center after the end of the grant. However, project directors at most colleges believed their relationships with the workforce system would fade once the grant ended.

Implications for Future Community College and Workforce Initiatives

The findings from implementation study of the Rounds 1 and 2 colleges, as summarized above, can help inform future community college and workforce initiatives to improve opportunities for adult learners to succeed in education and the workforce and to increase the pipeline of skilled workers for industries

with high-demand occupations. The successes, challenges, and lessons from the grant activities provide policymakers, community college and workforce practitioners, and others with a better understanding of the promising career pathways strategies to support future replication and scaling. The main implications from the Rounds 1 and 2 colleges for future initiatives are:

- **Community colleges can “package” multiple strategies to address the needs of adult learners and employers in a particular industry.** While career pathways serve as an overarching framework the TAACCCT grants, colleges can use multiple strategies packaged in different ways to serve a particular group of adult learners or industry. For example, one approach is the use of a virtual learning platform for incumbent workers or rural students that bring together curriculum redesign and online and self-paced learning, with academic supports to ensure participant success. Other approaches might include a set of statewide or multicollege strategies that focuses on creating a core curriculum as the first step on a career pathway for an industry with coordinated policies such as prior learning assessments and transfer and articulation to support accelerated learning and advancement along a career pathway.
- **Building relationships with employers and the public workforce system are important to ensuring connections to employment are strong for adult learners.** Staff at Rounds 1 and 2 colleges spent time and resources on building relationships with employers, mainly with success in engaging them beyond an advisory role such as providing work-based learning opportunities, serving as instructors, and providing equipment for training. In some cases, colleges worked closely with employers to offer incumbent worker training. These types of engagement help ensure education and training teaches the skills that adult learners need to find or advance in a job. Efforts to partner with the public workforce system could be more challenging, especially if the public workforce system organizations did not provide referrals and other resources as expected. However, some colleges worked more closely with American Job Centers, which could provide participants with tuition assistance, career counseling, job search assistance, and interview and resume preparation.
- **Many changes to community colleges systems can be institutionalized within and across colleges to ensure sustainability of the grant activities.** An issue that emerged was the sustainability of career pathways once the grant funding ended, a key concern for policymakers and practitioners. Curricula and new instructional tools such as online learning platforms are often sustainable components of the grants and can be shared and replicated widely. Policy changes such as credit for prior learning and transfer and articulation agreements can also last beyond the end of the grant. But there are potential challenges that can hinder sustainability. While the grants funded state-of-the-art equipment and facilities improvements, these assets could soon become out-of-date due to new technologies and colleges may need to find new resources to update them. Finding resources to continue funding for positions for new support staff such as career navigators can also be a challenge. In addition, the sustainability of employer partnerships can also be a challenge as economic conditions for different industries change. Developing sustainability plans early in a grant can help support successful continuation of the strategies that were most successful.

Other reports from the national evaluation also present implications of the TAACCCT grants for future community college and workforce initiatives.⁸ The national evaluation will continue to examine

⁸ All publications from the TAACCCT national evaluation are available on DOL’s Chief Evaluation Office website, found at <https://www.dol.gov/agencies/oasp/evaluation/completedstudies>.

the career pathways strategies implemented by the TAACCCT colleges and identify new approaches emerging from later grants with publications as follows:

- A series of briefs on the TAACCCT grant program
- A report on the perspectives of 41 employers who were identified as having strong relationships with Round 4 colleges;
- The Round 3 implementation study report, which provides new findings based on college survey of 187 colleges and visits to 14 colleges;
- The college survey report, which describes the grant activities from 263 Round 4 colleges;
- Reports for Rounds 1 and 2, Round 3, and Round 4 that synthesize the third-party evaluation implementation and impact findings, which will document how colleges implemented their grant activities and examine the successes and challenges of implementing the strategies they used and identify where there is rigorous evidence that such strategies had positive impacts on participants' education and employment outcomes;⁹
- A report using survey data and administrative records for nine grantees to describe the characteristics of the Round 4 participants, their service receipt, and their education and employment outcomes and using site visit data to better understand the strategies these grantees implemented; and
- A series of briefs focused on Round 4 grants that summarize findings about career pathways, systems change, and employer perspectives on strong relationships with community colleges.

⁹ DOL released the Rounds 1 and 2 synthesis report and the Round 3 implementation and synthesis reports at the same time as this report. See <https://www.dol.gov/agencies/oasp/evaluation/completedstudies> to access this report.

1. Introduction

In the wake of the 2007-2009 recession, the US Department of Labor (DOL) focused on building the capacity of community colleges to provide education and training that would increase the skills and education American workers to support the country's economic growth. The Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant program was a \$1.9 billion federal workforce investment. It aimed at helping community colleges across the nation increase their capacity to provide education and training programs for unemployed workers and other adult learners to prepare for in-demand jobs. DOL administered the grant program from 2011 to 2018 in partnership with the US Department of Education.¹⁰

Community colleges are public, two-year postsecondary institutions and major providers of education and training in the United States. These institutions primarily offer programs of study lasting two years or less, and they educate and train over 12 million students per year for a wide range of occupations (American Association of Community Colleges 2018). Many students, including dislocated workers and other adults, come to community colleges unprepared for college-level coursework and need remediation prior to taking academic or career and technical courses. Community colleges have also experienced cuts in state funding for the past decade, especially during the Great Recession in 2007-2009 (Mitchell, Leachman, and Masterson 2016). Community colleges struggle with low completion rates (38 percent), leaving many students without a credential that can help them find a job (Shapiro et al. 2015). The programs of study that community colleges offer, especially career and technical programs, often need to be updated to reflect changing industry and technological requirements for various occupations (Barnow and Spaulding 2015; Bragg 2001; Wilson 2015). These challenges have highlighted the need for community colleges to develop innovative ways to effectively deliver education and training that help adult learners by accelerating learning, supporting their persistence and completion of education and training, and connecting them to employment.

This report, part of a series of publications from the TAACCCT national evaluation, describes the strategies implemented by the Rounds 1 and 2 TAACCCT colleges. The introduction provides an overview of the grant program, the national evaluation, and the implementation study. The next part of the report provides an overview of the Rounds 1 and 2 colleges that received grant funding—single-institution grant colleges, colleges that led consortium grants, and colleges that were members of consortia—and the range of approaches and activities they implemented, based on an online survey. Then, the report provides an in-depth examination of 17 Round 2 colleges and the projects they

¹⁰ The grant program operated for seven federal fiscal years, from October 1, 2011, through September 30, 2018.

implemented, based on fieldwork conducted during their fourth and final year of their grant activities. It documents the targeted industries, project designs, participants, the implementation of the local projects, the partnerships developed, and the lessons learned from the perspectives of the directors, staff, faculty, partners, and participants. The report concludes with a discussion of the key findings for the Rounds 1 and 2 colleges, highlighting implications for future workforce and community college initiatives.

1.1. The TAACCCT Grant Program: Building the Capacity of Community Colleges

Congress authorized the TAACCCT grant program as part of the American Recovery and Reinvestment Act of 2009 to increase the capacity of community colleges to meet local and regional labor demand for a skilled workforce. The Health Care and Education Reconciliation Act, signed in March 2010, provided the TAACCCT grant program with \$2 billion in funding over fiscal years 2011–14, or approximately \$500 million annually over four rounds of grants.¹¹ DOL, which administers the grants in partnership with the US Department of Education, funded a total of 256 three- to four-year grants to institutions of higher education offering programs that can be completed in two years or less. The program funds both individual institutions and multicollge consortia that may benefit workers eligible for Trade Adjustment Assistance (TAA) and other adults across a state, region, industry sector, or cluster of related industries.¹² This section provides a summary of the goals of the grant program and the colleges awarded grants.

Goals of the TAACCCT Grant Program

The overarching goals of the TAACCCT grant program as described in the Rounds 1–4 grant announcements are to:¹³

1. better prepare the TAA-eligible workers and other adults for high-wage high-skill employment or reemployment in growth industry sectors by increasing their attainment of degrees,

¹¹ The total amount for the grant program was reduced to \$1.9 billion due to rescissions under the 2013 budget sequestration.

¹² To be eligible for TAA reemployment services, the Office of Trade Adjustment Assistance must certify that a group of workers has been adversely affected by foreign trade. A worker that meets the group eligibility criteria may apply for TAA services and benefits through their local American Job Center.

¹³ DOL released the grant announcements in spring of FY 2011 (Round 1), FY 2012 (Round 2), FY 2013 (Round 3), and FY 2014 (Round 4). For more information, see “Applicant Information,” Trade Adjustment Assistance Community College and Career Training Grant Program, last updated December 11, 2015, <https://www.doleta.gov/taaccct/applicantinfo.cfm>.

certificates, diplomas, and other industry-recognized credentials that match the skills needed by employers;

2. introduce or replicate innovative and effective methods for designing and delivering instruction that addresses specific industry needs and leads to improved learning, completion, and other outcomes for TAA-eligible workers and other adults; and
3. demonstrate improved employment outcomes for participants.

To achieve these goals, the grantees from all four rounds focused on developing and implementing career pathways approaches to build colleges' capacity for providing education and training to adult learners.¹⁴ *Career pathways approaches* to workforce development offer an articulated sequence of education and training programs focused on an industry sector, combined with support services, to enable individuals to enter and exit at various levels and to advance over time to higher skills, recognized credentials, and better jobs with higher pay.^{15, 16}

Core elements of the grants included stacked and latticed credentials, strengthening online and technology-enabled learning, developing transfer and articulation agreements, and using an evidence-based approach to developing the intervention (that is, implementing new or existing strategies that have shown preliminary or past success).¹⁷ DOL also required increased coordination with key stakeholders in the local and regional workforce system, including governors, employers and industry, the public workforce system, and other organizations that can support sector strategies. DOL increasingly emphasized the importance of strategic alignment among workforce stakeholders and partners, particularly in Rounds 2–4. These core elements were designed to ensure that the strategies implemented by the TAACCCT colleges would accelerate participants' learning, support their persistence and completion, and help them connect to employment. Lastly, DOL required that grantees participate in national evaluation activities and, for Rounds 2–4, that each grantee sponsor a third-party evaluation to assess the implementation and outcomes of the grant-funded activities.

Across all four rounds, there are many strategies that grantees developed and implemented to build their capacity for providing education and training programs to adult learners as a part of career pathways. To better understand the range of strategies implemented by the grantees, the national

¹⁴ More information on the goals of the TAACCCT grant program and by round can be found at <http://www.urban.org/research/publication/taaccct-goals-design-and-evaluation>.

¹⁵ There are many definitions of career pathways in the literature. The definition used for the TAACCCT National Evaluation aligns with the definition for the Career Pathways Design Study, which provides a high-level synthesis of the findings from career pathway research and design. See Sarna and Strawn (2018) and Schwartz, Strawn and Sarna (2018) for more information.

¹⁶ Appendix A provides the full definition of career pathways from the Workforce Innovation and Opportunity Act of 2014, which this definition reflects.

¹⁷ See appendix B to see the core elements across the four rounds.

evaluation team identified three broad categories of TAACCCT strategies—*accelerated learning*, *college persistence and completion*, and *connections to employment*. Figure 1.1 below provides definitions of each of these categories and a list of specific strategies within each category highlighted in this report.^{18,19}

Colleges Participating in TAACCCT Grants

Eligible institutions of higher education, community colleges and other postsecondary institutions, across the US applied for TAACCCT grant funding.²⁰ The TAACCCT grant program funded 256 grants to institutions in all 50 states, the District of Columbia, and Puerto Rico. Across the four rounds of grants, DOL awarded:

- 49 grants in Round 1;
- 79 grants in Round 2;
- 57 grants in Round 3; and
- 71 in Round 4.

The program funded both individual institutions and multicollege consortia. Single-institution grants supported innovation and capacity building at the institutional level, and consortium grants supported broader systemic changes at the national level from multistate consortia or at the state level from single-state consortia.^{21, 22} It was DOL's intention to award grants through the competitive process. However, some awards were considered "state-designated" grants, noncompetitively awarded to ensure all states received grant funding in each round, per the authorizing legislation.

¹⁸ In each TAACCCT evaluation report, different strategies will be highlighted based on which round(s) of the grants and data sources are the focus of the report.

¹⁹ Chapters 2 and 3 and the glossary provide definitions of the specific strategies identified in this report.

²⁰ Eligible institutions are institutions of higher education, as defined in Section 102 of the Higher Education Act of 1965 (20 USC 1002), that offer programs that can be completed in two years or less. Institutions of higher education include public, proprietary, or other nonprofit educational institutions. For more information on the institutions awarded TAACCCT grants, see TAACCCT Grantee Characteristics, the second brief in a series about the TAACCCT grant program. It can be found at <http://www.urban.org/research/publication/taaccct-grantee-characteristics>.

²¹ Within the solicitations for grant applications, single-institution applicants were encouraged to focus the proposed project on one specific project strategy that can be fully implemented within the grant period with a scope that appropriately reflects the size of the requested funding amount, as opposed to implementing a series of complex strategies that may be challenging to complete within the grant period.

²² For consortium grants, one college acts as the lead institution and applies for grant funding on behalf of the partnering colleges. Although DOL did not award a grant to a lead institution in every state for each round, at least one college in every state received grant funding in every round, if not as a single or lead institution, then as part of a consortium led by a college in another state.

FIGURE 1.1

Types of Strategies Identified by the TAACCCT National Evaluation

ACCELERATED LEARNING	PERSISTENCE AND COMPLETION	CONNECTIONS TO EMPLOYMENT
<p>Colleges reduce adult learners' time to completing a program of study by:</p> <ul style="list-style-type: none"> ■ redesigning curriculum, credentials, and programs to help students move through coursework more quickly and earn credentials as they progress through programs; ■ aligning college enrollment, credit award, and other college policies; and ■ using technology and course scheduling to support learning for working students or students with families. 	<p>Colleges support adult learners' enrollment, progress, and completion of programs of study by:</p> <ul style="list-style-type: none"> ■ providing academic and nonacademic support services; ■ redesigning developmental and adult education programming for students who are underprepared for college; and ■ helping students easily transfer to more advanced programs of study and applying credits that they have already earned to persist in postsecondary education. 	<p>Colleges connect adult learners to the workforce by:</p> <ul style="list-style-type: none"> ■ developing curriculum to help students learn technical skills through on-the-job and simulated work experiences; ■ preparing students for the workforce by providing guidance on career options, building job readiness skills, and helping support job search activities; and ■ building partnerships with employers, industry associations, the public workforce system, and other organizations to support successful transitions to the workforce.

SPECIFIC STRATEGIES HIGHLIGHTED IN THIS REPORT		
Accelerated Learning	Persistence and Completion	Connections to Employment
<ul style="list-style-type: none"> ■ assessment technology ■ asynchronistic scheduling ■ credits for work experience ■ hybrid learning ■ industry-recognized credentials ■ modular courses ■ online learning ■ prior learning assessments ■ self-paced learning ■ stackable or latticed credentials 	<ul style="list-style-type: none"> ■ articulation agreements ■ competency-based learning ■ contextualized learning ■ enhanced student support ■ improvement of financial aid processes ■ improvement to basic skills instruction ■ peer support groups or peer mentors ■ restructuring of developmental education ■ team teaching 	<ul style="list-style-type: none"> ■ apprenticeship ■ career coaching/counseling ■ clinical placements ■ cooperative education or work-study program ■ employer and industry partnerships ■ industry mentors ■ internships ■ job shadowing ■ occupational preparatory classes ■ on-the-job training ■ public workforce system partnerships ■ simulations ■ work-based learning

Source: Eyster 2019.

Of the 49 grants awards in Round 1, 32 were competitive—9 single institution and 23 consortium grants—and 17 were state-designated grants. Of the 79 grant awards in Round 2, 54 were competitive—27 single institution and 27 consortium grants—and 25 were state-designated grants. The period of performance for the Round 1 grants was October 2011 through September 2014 but DOL extended the vast majority of grants to September 2015. The period of performance for the Round 2 grants was October 2012 through September 2016.

Across single-institution grantees, lead consortium grantees, and consortia member colleges, a total of 729 unique colleges participated in grant activities across the four rounds.²³ The state with the greatest number of institutions to receive grant funding was California (49), followed by Tennessee (41) and New York (38). Almost two-thirds of the colleges participating in the grants (60 percent) were involved in one grant project. A quarter of colleges participated in two grant projects, and the remaining 15 percent participated in three or more grant projects. Eight grants was the highest number of grants in which any one college participated.

The grant funding reached a large proportion of community colleges. Of the 729 postsecondary institutions that participated in grant activities, 82 percent were two-year, public, degree-granting institutions.¹ This represents nearly two-thirds (64 percent) of the 934 two-year, public, degree-granting institutions in the country in the 2013–2014 school year.

The funding levels for grants varied, reflecting changes in available funding and funding priorities. Grant awards ranged from \$2.2 million to \$25.0 million across the four rounds.²⁴ The highest number of grantees (88) were awarded funding between \$2.5 million and \$5.0 million, with the number of grantees receiving smaller grants (less than \$5.0 million) growing by Round 4. Round 1 grants ranged from \$2.5 million to \$5 million for single institutions and from \$2.43 million to \$24.65 million for consortium applicants.²⁵ Round 2 grants ranged from \$2.20 million to \$3.36 million for single institutions and from \$2.5 million to \$15 million for consortium applicants.

²³ For more information on the postsecondary institutions that received TAACCCT funding, see the second brief in a series about the TAACCCT grant program. It can be found at <http://www.urban.org/research/publication/taaccct-grantee-characteristics>.

²⁴ For more information on the grant funding, see the second brief in a series about the TAACCCT grant program. It can be found at <http://www.urban.org/research/publication/taaccct-grantee-characteristics>.

²⁵ In Round 1, applicants had the option to apply for funding that would exceed the allocation ceiling (“cap breaker” funding). To be awarded additional funding, applicants needed to propose specifically focused projects outlined in their grant announcements. For more information about these Round 1 projects, see the second brief on grantee characteristics at <http://www.urban.org/research/publication/taaccct-grantee-characteristics>.

1.2. Building the Evidence: The TAACCCT National Evaluation

The TAACCCT national evaluation, which is sponsored by DOL's Chief Evaluation Office and led by the Urban Institute for Rounds 1-3, seeks to build evidence about the capacity-building strategies and career pathways approaches implemented by TAACCCT grantees.²⁶ The national evaluation of the TAACCCT grant program began in October 2012 after DOL awarded the Round 2 grants. The evaluation uses a mix of qualitative and quantitative methods to understand and assess the program to inform future federal workforce investments and policy. In addition, the national evaluation synthesizes the findings from the grantee-sponsored third-party evaluations to support building the evidence of the effectiveness and understanding of community college innovations for providing training to adult learners.²⁷ This chapter provides an overview of the national evaluation, including a conceptual framework for the evaluation, the overall evaluation design and components, and a description of the implementation study, which is the basis for this report.

Conceptual Framework

Figure 1.2 presents the conceptual framework for the evaluation. To better understand how the TAACCCT grants work and what their intended outcomes are, the conceptual framework articulates the program visually, demonstrating the core elements and program development and activities. With current economic conditions and policy and budget climates as context, the model describes current workforce needs that the grant activities address.

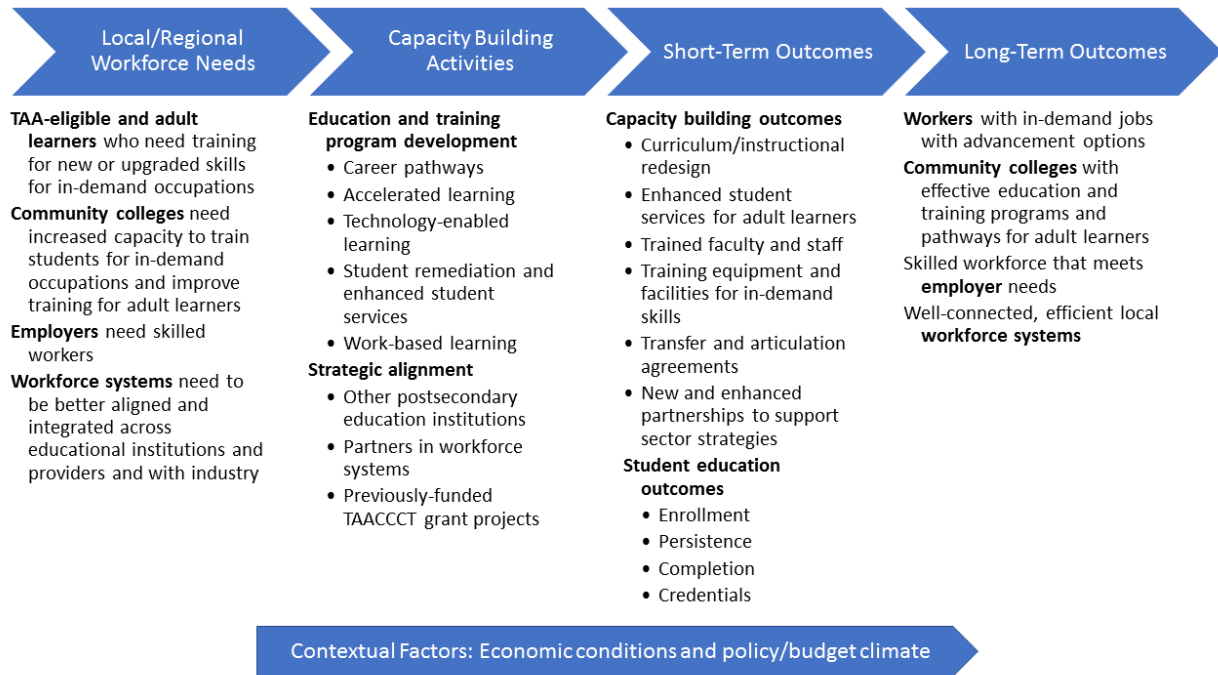
The framework highlights how the TAACCCT grant program funded improvements to colleges' capacity to educate and train students for high-demand occupations and improve strategic alignment of partnerships in the workforce system and with previously funded TAACCCT grants. Grant activities seek to increase community colleges' capacity to train adult learners for in-demand occupations and to improve short-term student outcomes, such as enrollment, persistence in courses and school programs, credentialing, and completion.

²⁶ For the purpose of the national evaluation, career pathways approaches to workforce development offer an articulated sequence of education and training programs focused on an industry sector, combined with support services, to enable individuals to enter and exit at various levels and to advance over time to higher skills, recognized credentials, and better jobs with higher pay.

²⁷ Across the four rounds of grants, there were approximately 200 third-party evaluations. Final evaluation reports are available on www.SkillsCommons.org.

FIGURE 1.2

TAACCCT Conceptual Framework



Source: The Urban Institute and its partners developed the conceptual framework as a part of the TAACCCT national evaluation. This framework has been updated from the original design to reflect all rounds of the TAACCCT grants. Some activities may not apply to all rounds, such as the strategic alignment for previously funded TAACCCT grant projects, which are part of the Round 3 and 4 grants. For more information, please see appendix B on differences across the rounds.

The expected long-term outcomes of the grant activities include improved student employment, retention, and earnings, as well as better relationships among partners in local and regional workforce systems. The grant activities are expected to result in effective education and training programs and pathways for adult learners, ensuring that students are graduating with skills that meet employer demands. The conceptual framework guides the national evaluation design and activities, as reflected in the implementation study discussed next.

Implementation Study Design

While the national evaluation has multiple components (see box 1.1), the implementation study documents and draws lessons from the implementation of grant activities across all four rounds. The main question of interest for the study is: What are the types of emerging ideas for service delivery improvement and/or system reform that seem the most promising for further research? To address this question, the study describes how grantees built capacity to provide innovative programs of study and pathways and supported participants' educational outcomes, as shown in the conceptual framework.

BOX 1.1

TAACCCT National Evaluation Components and Publications

- An **implementation analysis** (Rounds 1–4) of the service delivery approaches developed and the systems changed through the grants based on a survey of colleges and visits to selected colleges
 - **The Trade Adjustment Assistance Community College and Career Training Grant Program: Implementation of the Rounds 1 and 2 Grants – Final Report (this report)**
 - *Implementation of the Round 3 Trade Adjustment Assistance Community College and Career Training Grants – Final Report*
 - *A Picture of the Trade Adjustment Assistance Community College and Career Training Grants: Results from a Survey of Round 4 Colleges – Final Report*
 - *Topic Briefs from Round 4: Context, Infrastructure, and Alignment Matter: Statewide Systems Change in Round 4 of TAACCCT; Building Career Pathways Programs and Systems: Insights from TAACCCT Round 4; and Employer Perspectives on Building Partnerships with Community Colleges: Lessons for Local Leaders and Practitioners*
 - *Early Descriptive Briefs: TAACCCT Goals, Design, and Evaluation; Grantee Characteristics; Approaches, Targeted Industries, and Partnerships; and Early Results of the TAACCCT Grants*
- **Syntheses of third-party evaluation findings** (Rounds 1–4) to draw a national picture of the implementation of the TAACCCT capacity-building strategies and build evidence of the effectiveness of the strategies on participants' education and employment outcomes
 - *A Synthesis of Findings from the Rounds 1 and 2 Trade Adjustment Assistance Community College and Career Training Third-Party Evaluations – Final Report*
 - *Systems Change in Community Colleges: Lessons from a Synthesis of the Round 3 TAACCCT Third-Party Evaluation Findings – Final Report*
 - *A Synthesis of Impact Findings from the Round 3 Trade Adjustment Assistance Community College and Career Training Third-Party Evaluations – Final Report*
 - *Implementation and Impact Synthesis Report: Round 4 TAACCCT Third-Party Evaluation – Final Report*
- An **outcomes study** of nine Round 4 grantees using survey data and administrative records to better understand the characteristics of TAACCCT participants, their service receipt, and their education and employment outcomes
 - *Trade Adjustment Assistance Community College and Career Training Grants: Round 4 Outcomes Study – Final Report and Grantee Profiles*
- A **study of employer relationships** with selected Round 4 employer-partners to better understand employers' perspectives on how to develop and maintain strong relationships with colleges
 - *The Employer Perspectives Study: Insights on How to Build and Maintain Strong Employer-College Partnerships – Final Report*

The implementation study also examines grantees' progress towards the long-term outcomes of the TAACCCT grant program by highlighting the accomplishments and challenges to date and lessons learned that can be useful to policymakers and practitioners wishing to replicate the approaches implemented by grantees. This report provides implementation findings from the Rounds 1 and 2 colleges.

The study uses two primary sources of data. First, the evaluation team administered an online survey to all TAACCCT colleges—single-institution grantees, consortium-lead grantees, and consortium-member colleges—for each round of the grants. The survey presents a picture of the colleges and activities they implemented, which provides a more ground-level view of implementation strategies than would be available at the grantee level. Second, the team conducted interviews with college staff and partners and focus groups with participants during site visits to purposively selected colleges that participated in grants to gain an in-depth understanding of the implementation of grants from multiple perspectives.

The unit of analysis for the implementation study is the TAACCCT college—single-institution grantees, consortium lead grantees, and consortium-member colleges. For the survey results presented in chapter 2, the universe is the 663 colleges that participated in the 128 Rounds 1 and 2 TAACCCT grants; 618 colleges responded to the survey. For chapter 3 of the report, results from site visits to 17 colleges that participated in 10 Round 2 grants are presented. The 10 grants and 17 colleges were purposively selected to represent a range of grant experiences.²⁸ Box 1.2 below provides additional explanation the key terms used for the implementation study.

BOX 1.2

Terms for the TAACCCT National Evaluation

college: Any institution of higher education that officially participated in grant activities, with nearly all receiving grant funds for their involvement. They could be single-institution grant colleges, consortium-lead colleges, and consortium-member colleges.

college staff: Staff working under or with a college's project director to support implementation of a local grant project. This could include new staff hired specifically for the grant or staff already employed by the college such as faculty, other instructors, advisors, and advisors that supported grant activities.

grant activities: The activities conducted as a part of the grant by the grantee or member colleges. They include implementation of an education and training program or programs, curriculum and credential development, internal policy changes, technology (e.g., online learning), assessment instruments, instruction, support services, equipment purchases, partnership development and engagement, or transfer and articulation agreements. The grants did not fund participant-specific activities such as childcare and tuition and fees.

grant director: Individual who is responsible for the successful implementation of all grant activities under a grant and is employed or contracted by the lead institution or college.

grant project: the structure under which the overall grant is managed and local projects for consortium grants are coordinated.

²⁸ Additional details on study's methods and data collection are provided in appendix C.

grant staff: Staff working directly under the grant director to support implementation of all TAACCCT-funded activities.

grantee: The college that was the grant recipient of record. It could be a single-institution grant college or a consortium-lead college.

member college: A college that was a member of a consortium grant but was not the lead institution.

local project: The structure under which all the grant activities are managed and coordinated at each college. The local project and the grant project are likely the same for single-institution grant colleges.

participants: Individuals who enroll in grant-funded education and training programs of study or in a required, grant-funded course within such a program of study.

program of study: A comprehensive, structured approach designed to deliver academic and career and technical education that prepared participants for postsecondary education and career success that colleges developed and implemented as a part of the grant activities. When supported through the TAACCCT grant, it is referred to as “grant-funded program.”

project director: Individual who was responsible for the implementation of the local TAACCCT projects. Individual could also be the grant director in single-institution grants or for a local project at the grantee college.

TAACCCT grant program: The federally-funded grant initiative administered by the US Department of Labor.

2. Overview of TAACCCT Grant Activities: Findings from Survey of Colleges in Rounds 1 and 2

This chapter of the report describes the overall characteristics of and activities implemented by Rounds 1 and 2 TAACCCT colleges, based on responses to the online survey described in chapter 1.²⁹ The chapter first provides an overview of the funding and key features of the areas served by the TAACCCT colleges (both grantees and member colleges) in Rounds 1 and 2. It subsequently examines the structure and key design features of local grant projects as implemented by the colleges, including approaches to participant recruitment, basic design features of the projects, partnerships within colleges and those forged with outside organizations and industry, and key accomplishments by the colleges. Where appropriate, differences between Round 1 and Round 2 colleges are highlighted.

2.1. Funding, Geographic Reach, and Economic Context

The grant announcements for the Rounds 1 and 2 provided guidance on how applicants should structure their grants (for both single-institution or consortium grants), and the availability of funding based on this structure. Colleges also had to design their grant activities to address key economic and workforce issues and select an industry or industries that they would target for education and training programs. This section presents information on these basic characteristics of the Rounds 1 and 2 colleges and their local context.

These are key findings from this section:

- There was a wide range of grant funding for the individual colleges participating in Rounds 1 and 2 grants—from \$22,216 to \$15 million. The average portion of the grant award that was allocated to Rounds 1 and 2 colleges was \$1.6 million.
- Colleges often served more than one county and could serve multiple types of geographic areas. Seven in 10 colleges indicated that they served rural areas, with equal shares (about 4 in 10) serving urban and suburban areas.
- The most common factor identified by colleges as shaping the design and implementation of local projects was economic recovery/expansion in the region or locality. The design and implementation was also affected by receipt of new funding/grants by organization, organizational/management changes or restructuring, population/demographic changes in the region/locality, and an increase or decrease in TAA-certified plant closings.

²⁹ Additional details on the survey administration are in appendix C and survey response tables are in appendix D.

- From the five years prior to receipt of the grant to the fourth year of implementation, economic conditions generally improved slowly in areas served by the colleges. Of colleges that indicated that their area was substantially or somewhat affected in the five years before their grant, nearly half reported some improvement, although many indicated they were still somewhat affected by economic conditions.
- The leading industry sectors of focus by the colleges' grants were manufacturing and health care and social assistance.

Funding for Local TAACCCT Projects

DOL awarded up to \$500 million in grant funding for each of the four rounds of the grant program. The funding guidelines differed for the Rounds 1 and 2 grants. For Round 1, guidelines allocated between \$2.5 and \$5 million for individual applicants and between \$2.5 and \$20 million for a consortium. For Round 2, the minimum allocation for individual applicants remained at \$2.5 million, but the maximum decreased to \$3 million; the minimum allocation for a consortium increased to \$5 million, and the maximum allocation declined to \$15 million. Though grant awards were not expected to fall below or exceed these funding guidelines for applicants, DOL considered exceptions for Round 1 colleges that provided justification for alternative funding levels.²

The average portion of the grant funding that was allocated to individual colleges participating in the Rounds 1 and 2 grants was \$1.6 million and ranged from \$22,216 to \$15 million.³⁰ Also, the portion of the grant funding among these colleges varied according to whether the college served as a consortium lead or member (e.g., in Round 1, consortium leads received an average of \$3.0 million in grant funding whereas consortium members received an average of \$1.1 million). Some colleges formally participated in a consortium but did not receive any grant funding. These colleges may have implemented curricula designed by other colleges within the consortium, played advisory roles in designing programs, or implemented recruitment and articulation agreements.

Geographic Reach of the TAACCCT Activities

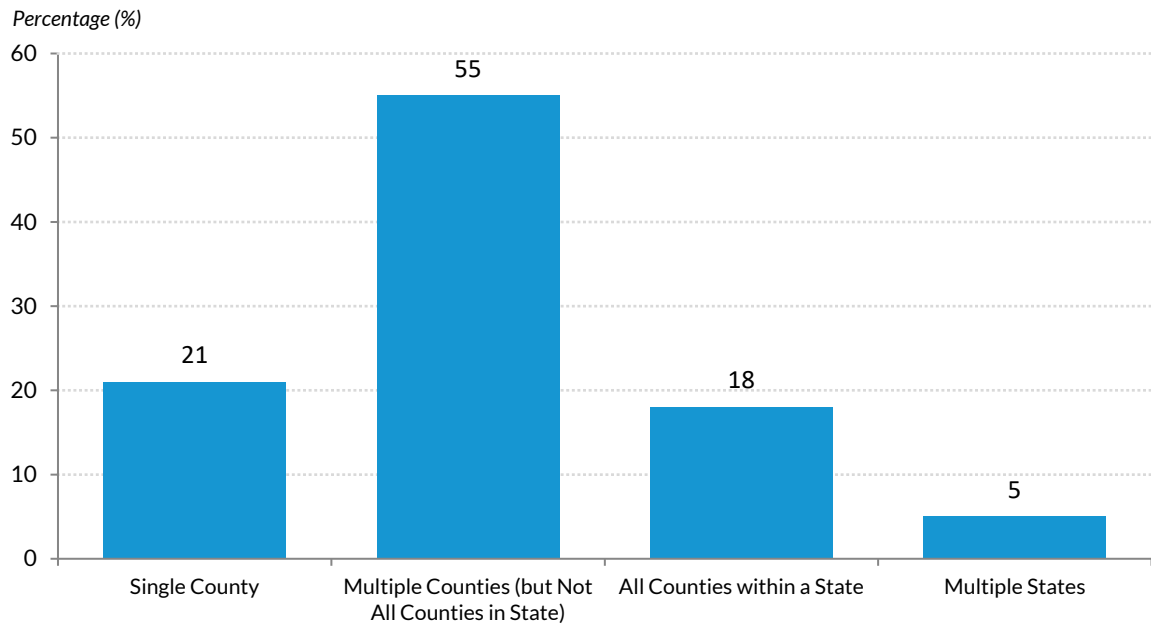
Another goal of these grants was to reach a diverse group of students spread across large and varied geographical areas. As shown in figure 2.1, most of the colleges (nearly four-fifths) served areas that encompassed more than a single county. Slightly more than half served areas that encompassed multiple counties, with a one-fifth indicating that they served the entire state. A small proportion of colleges served areas that stretched across multiple states.

³⁰ This average excludes consortium-member institutions who reported receiving no funding as part of their grant.

As shown in figure 2.2, the Rounds 1 and 2 colleges served participants in urban, rural, and suburban settings. Similar proportions of colleges served urban and suburban localities, while more than two-thirds characterized some of their service areas as rural.^{31, 32}

FIGURE 2.1

Geographic Area Served by Rounds 1 and 2 TAACCCT Colleges



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Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–16.

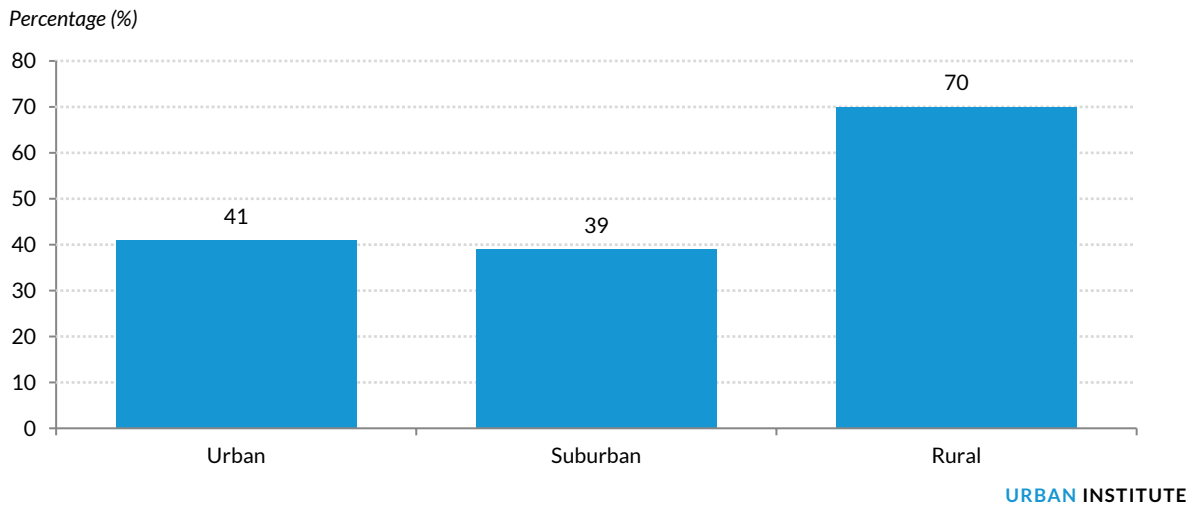
Notes: N=583; 7 missing respondents.

³¹ Colleges could select more than one type of area served.

³² See appendix tables E.2 and E.3 for more detail.

FIGURE 2.2

Percentage of Rounds 1 and 2 TAACCCT Colleges Serving Urban, Suburban, and Rural Areas



Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–16.

Notes: Percentages do not add to 100 percent. Respondents could provide more than one response. N=580; 10 missing respondents.

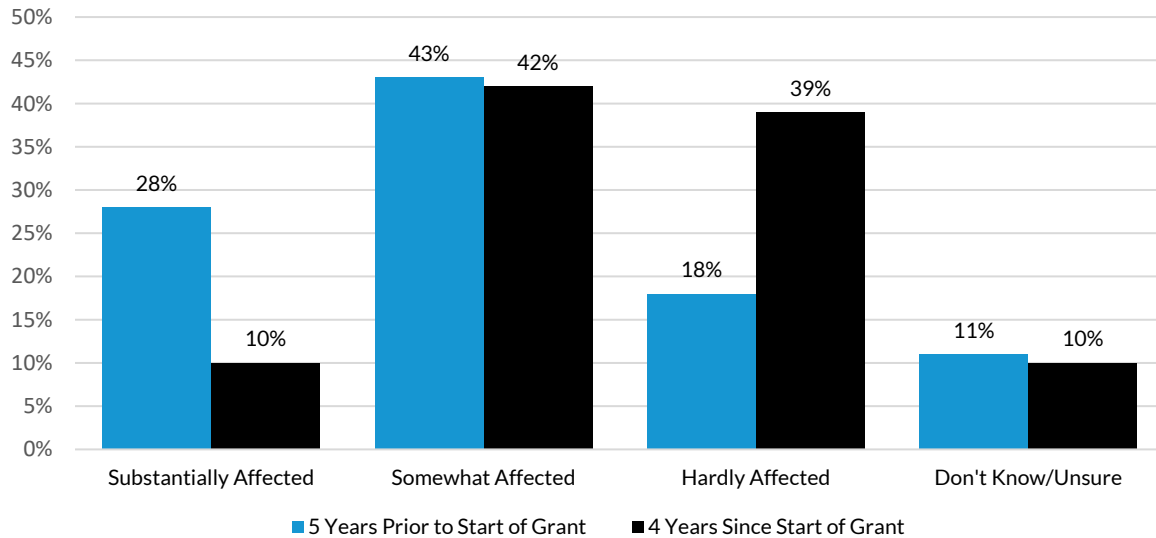
Local and Regional Economic Conditions

The survey asked the colleges to characterize economic conditions in the area served in the five years leading up to the start of their grants, as well as in the years since the start of their grants. From the five years prior to receipt of the grant to the fourth year of implementation (when the survey was fielded), economic conditions generally improved slowly in areas served by the colleges. As shown in figure 2.3, most colleges indicated their service areas had been substantially or somewhat affected by major employer plant closings or layoffs in the five years before the grant. Of these colleges, nearly reported some improvement, although many indicated they were still somewhat affected by economic conditions.³³

³³ See appendix table E.4 for more detail.

FIGURE 2.3

Extent to Which Area Served by Rounds 1 and 2 TAACCCT Colleges Has Been Affected by Plant Closings and Layoffs in the Five Years Prior to and the Four Years Since the Start of the TAACCCT Grant



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Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–16.

Notes: N=590; 9 missing respondents in 5 years prior; 11 missing respondents for years since start of grant.

Colleges also identified significant environmental factors in the four years since the start of the grant that they perceived as impacting implementation of their local grant projects. As shown in table 2.1, half of the colleges identified economic recovery/expansion in the region/locality, and a third of colleges reported the receipt of new funding or grants, in addition to grant funding, as affecting the implementation of their local projects. Less than 30 percent of colleges indicated that there were other factors influencing implementation, including organizational/management changes or restructuring, population/demographic changes in the region/locality, and an increase or decrease in TAA-certified plant closings.

TABLE 2.1

Significant Factors in Shaping the Implementation of Rounds 1 and 2 Local TAACCCT Projects

Identified as Significant Environmental Factor in the Years Since the Start of the Grant Impacting Implementation of Local Project	Number	Percent
Economic recovery/expansion in the region/locality	287	50%
Receipt of new funding/grants by your institution	187	33%
Organizational/management changes or restructuring	158	28%
Population/demographic changes in the region/locality	136	24%
Increase/decrease in TAA-certified plant closings	132	23%
Loss of funding/grants by your institution	78	14%
Employer demand/workforce alignment changes	54	9%

Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–16.

Notes: N= 573; 17 missing respondents. Percentages do not add to 100 percent. Respondents could provide more than one response.

Colleges typically focused their projects on key industry sectors within their localities. When asked about local industry sectors that were among the three top employers within the area being served by their grant, 66 percent ranked the health care and social assistance sectors as first, second, or third in terms of employment, and 53 percent of colleges ranked manufacturing among the top industry sectors in their area (see figure 2.4). Additional industry sectors ranked among the top three employers by 15 percent or more of colleges were: education services; retail trade; accommodation and food services; professional and technical services; transportation and warehousing; and agricultural, fishing, and hunting. As shown in figure 2.5, the two leading sectors that were the focus of the colleges' local projects were manufacturing and health care and social assistance. Colleges also focused on professional, scientific and technical services, information, construction, transportation and warehousing, education services, and utilities.³⁴

³⁴ See appendix table E.5 for more detail.

FIGURE 2.4

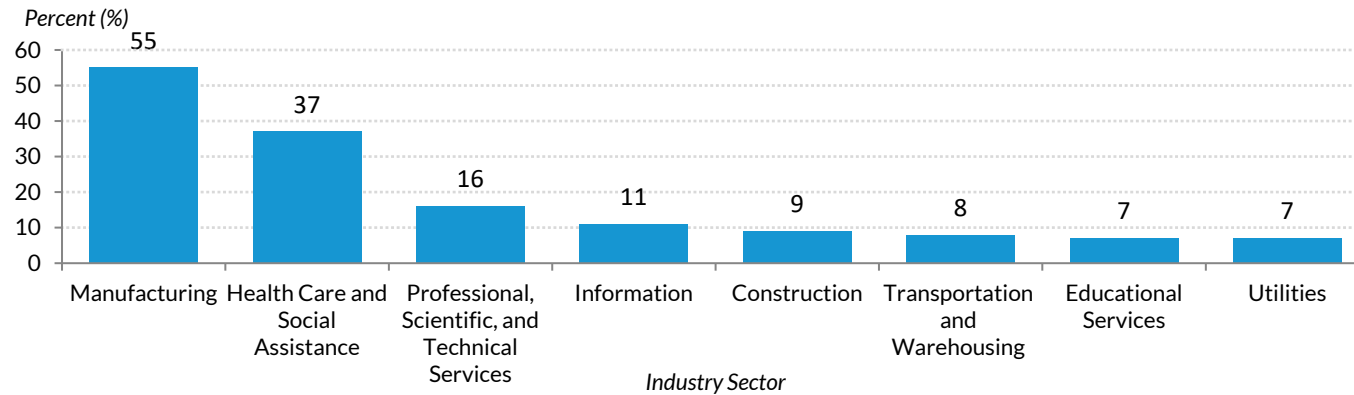
Industry Sectors in Service Areas of Rounds 1 and 2 TAACCCT Colleges



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FIGURE 2.5

Targeted Industry Sectors of Rounds 1 and 2 TAACCCT Colleges



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Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–16.

Notes: N=590. Percentages do not add to 100 percent. Respondents could provide more than one response.

2.2. Programs Developed and Implemented by TAACCCT Colleges

DOL encouraged TAACCCT grant applicants to develop programs of study that would “expand and improve their ability to deliver education and career training programs” for adult learners. DOL prioritized funding for applicants that proposed implementing strategies supported by previous data and evidence with the understanding that these approaches were more likely to generate significant positive change and advance learning. This section first discusses the most commonly implemented education and training strategies. The education and training strategies are organized by the three categories identified by the national evaluation: ***accelerated learning***, ***college persistence and completion***, and ***connections to employment***. Next, the section provides a picture of the credits and credentials offered by the colleges for their grant-funded programs and the articulation policies and agreements colleges developed. Finally, the section provides an overview of the nonacademic student supports offered by the colleges, including employment supports.

These are key findings from this section:

- The most common types of accelerated learning strategies implemented were stackable and latticed credentials, hybrid learning, and industry-recognized credentials.
- The most common types of college persistence and completion strategies were enhanced academic support, contextualized learning, and articulation activities.
- The most common types of strategies to connect participants to employment were career coaching and counseling, simulated learning, and internships.
- Over three-quarters of colleges implemented programs of study from which participants could earn credits. Additionally, about one-third developed professional/industry-recognized certifications; about a quarter developed certifications of completion for training programs lasting one to two years; and nearly one-fifth led to academic degrees.
- Nearly 40 percent of colleges established articulation agreements between certificate and degree programs and implemented PLAs with grant funding, allowing for credits to be counted towards programs of study.
- In addition to enhanced academic support, colleges offered and leveraged nonacademic support services, most commonly access to Pell grants, case management or proactive advising, and other forms of financial aid. The colleges’ grant partners also provided various supportive services, most commonly coordination with public assistance, transportation assistance, and emergency assistance.
- Colleges most frequently offered the following employment services: interviewing skills/résumé workshops, employment/career counseling, referrals to job openings, job readiness/soft skills training, and job search assistance.

Education and Training Strategies Implemented by TAACCCT Colleges

This section describes the education and training strategies implemented by the Rounds 1 and 2 colleges responding to the survey. In the grant announcements for Rounds 1 and 2 grants, DOL identified a substantial range of educational and training activities for adult learners that could be the focus of grant activities. The strategies are organized by three categories identified by the national evaluation: *accelerated learning*, *college persistence and completion*, and *connections to employment*.

Table 2.2 provides a breakdown of the many specific strategies that were implemented by the colleges within the three categories. The glossary at the beginning of this report provides definitions of the key strategies and approaches discussed in this section. Chapter 3 of the report provides more detail on the implementation of each of these strategies, based on the experiences of 17 colleges.

TABLE 2.2

Education and Training Strategies Implemented by Rounds 1 and 2 TAACCCT Colleges

Strategies	Number	Percent
Accelerated Learning		
Stackable or latticed credentials	388	66%
Hybrid learning	362	62%
Industry-recognized credentials	286	49%
Online teaching/learning	286	49%
Design of new career pathways program	274	47%
Modular courses	243	42%
Prior learning assessments	241	41%
Credits for work experience	151	26%
Self-paced learning	146	25%
Asynchronistic scheduling	123	21%
Assessment technology	125	21%
Real-time, online instruction	71	12%
College Persistence and Completion		
Enhanced academic support	319	55%
Contextualized learning	266	46%
Articulation from programs to more advanced programs	240	41%
Competency-based learning	225	39%
Improvements to basic skills/adult basic education	227	39%
Team teaching	175	30%
Restructuring of developmental education	118	20%
Peer support groups or peer mentors	114	20%
Improvement of financial aid processes	67	11%
Improvements to English as a second language instruction	51	9%
Connections to Employment		
Career coaching or counseling	408	70%
Simulated learning	279	48%
Internships	274	47%
Industry mentors	139	24%
Clinical placements	119	20%
Job shadowing	111	19%

Strategies	Number	Percent
Occupational preparatory classes	107	18%
On-the-job training (other than registered apprenticeship)	93	16%
Cooperative education or work-study program	81	14%
DOL-approved registered apprenticeships	37	6%

Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–16.

Notes: N=584; 6 missing respondents. Percentages do not add to 100 percent. Respondents could provide more than one response.

Accelerated learning for adult learners was a major strategy of the Rounds 1 and 2 grants.³⁵ Of the accelerated learning strategies, the most common was stacked and latticed credentials. A stacked or latticed credential is part of a sequence of credentials that can be accumulated over time to build up an individual's qualifications and help them move along a career pathway; a credential is considered latticed if it connects to multiple career pathways. The second most common accelerated learning strategy was hybrid learning, where coursework is provided both online and in the classroom. The third most common accelerated learning strategy was industry-recognized credentials, which are credentials developed, offered, or endorsed by an industry association, or are used by companies within an industry for hiring. As the development of stackable and latticed credentials and technology-enabled learning were core elements of the grants, it is not surprising that credentials and hybrid learning would be the most common accelerated learning strategies.³⁶

Colleges also implemented strategies to help support college persistence and completion for adult learners. The most common strategy was providing enhanced academic support to participants, which included activities such as personalized instruction or digital tutoring designed to help students successfully learn course content outside the classroom.³⁷ The second most common persistence and completion strategy implemented by colleges was contextualized learning, where instructors embedded learning related to traditional educational subjects into technical coursework. Colleges also sought to articulate programs of study to more advanced programs, the third most common persistence and completion strategy, to ensure that participants could continue along a career pathway. Articulation could occur with programs within a college or across colleges.

³⁵ See the table in appendix B, which provides information on major areas of focus across all four grant rounds.

³⁶ Stackable and latticed credentials was a core element of the Round 2 grants and technology-enabled learning was a core element of the Rounds 1 and 2 grants. See the table in appendix B, which provides information on the core elements and other areas of focus across all four grant rounds.

³⁷ More information on nonacademic support services is provided in a later section.

As preparing participants for the workforce was a major goal of the grant program,³⁸ colleges developed education and training strategies to help connect participants to employment. The most common strategy of the colleges was career coaching or counseling, a strategy where advisers and counselors provided career guidance and support to participants. The second most common strategy was simulated learning, where participants practiced skills in a simulated work setting, such as a factory floor or a hospital room, or online. Internships (work-based learning opportunities where students gained work experience in an occupation) was the third most common strategy.

Occupations of Training, Credits, Credentials, and Articulation

This section examines the basic design elements of the projects implemented by the Rounds 1 and 2 TAACCCT colleges that responded to the survey, including the occupations targeted for training and the credits and credentials awarded by the grant-funded education and training programs.

Occupations.³⁹ Occupations in the manufacturing and health care/social assistance sectors were among the most commonly targeted occupations. As shown in figure 2.6, occupations related to manufacturing accounted for seven of the top ten reported occupations, and health care occupations made up three of the top ten (and five of the top twelve). The most commonly reported occupational categories were in the manufacturing sector: welders, cutters, solderers, and brazers; industrial machinery mechanics; and machinists.^{40,41} There were some differences by round in the occupations targeted for training. As shown in figure 2.6, a higher proportion of Round 2 colleges than Round 1 colleges focused on the five most-reported occupations (all manufacturing-related occupations).⁴²

³⁸ See pages 2-3 for the three major goals of the TAACCCT grant program.

³⁹ The grant announcement required applicants to list and provide “evidence of the need for training in the industries and occupations on which the project will focus.” Applicants were required to perform community outreach as well, providing evidence that such occupations were in demand. The list of occupations provided to survey respondents was compiled by aggregating the top 54 occupations grant-funded institutions across all rounds indicated targeting in their original grant applications.

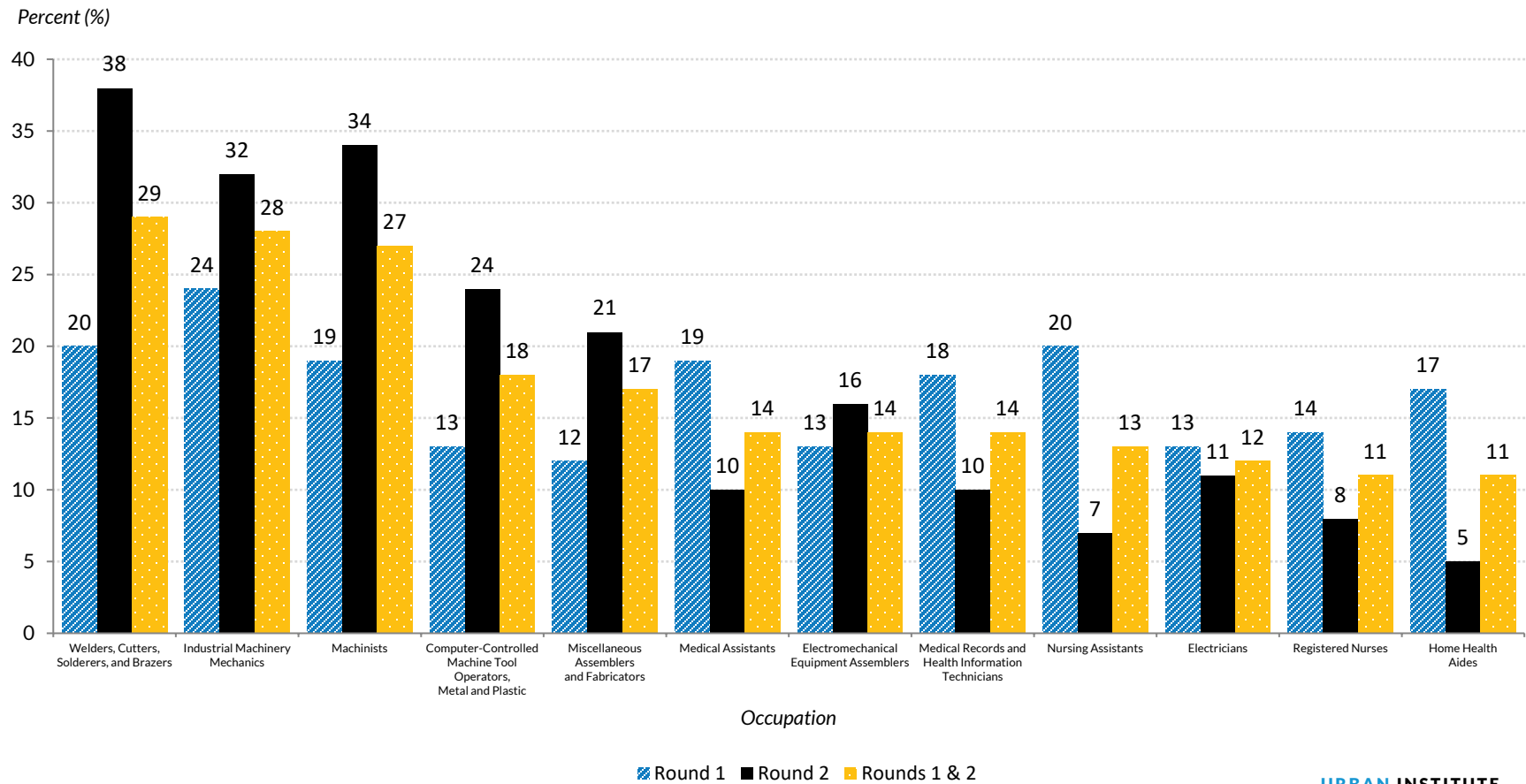
⁴⁰ The top industry for these occupations is manufacturing, according to DOL’s O*NET website, a national comprehensive resource on occupations in the United States. Welders, cutters, solderers, and brazers are also employed in the construction industry.

⁴¹ For definitions of these occupations, please refer to the glossary at the beginning of the report.

⁴² See appendix table E.6 for more detail.

FIGURE 2.6

Top Occupations of TAACCCT-Funded Programs of Study



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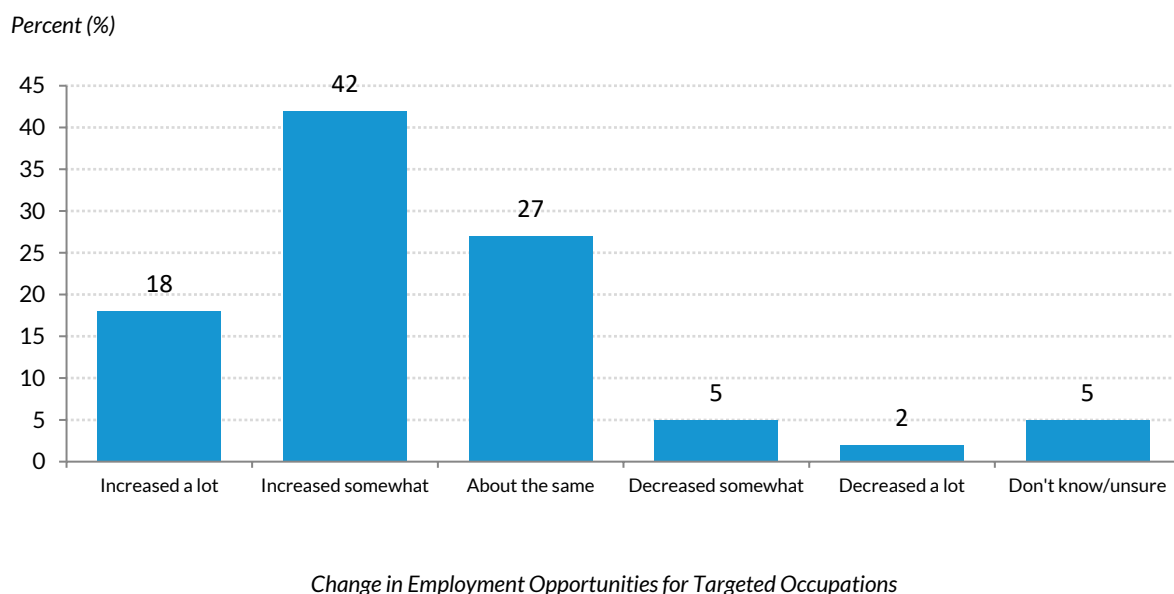
Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–16; see appendix E.10 for additional occupations.

Notes: N=590; 0 missing respondents.

The survey also asked colleges how employment opportunities for these targeted occupations had changed in their regions since the start of their grant. As shown in figure 2.7, well over half of the colleges reported employment opportunities for these occupations had increased, either somewhat or a lot. Only 7 percent of the colleges indicated these employment opportunities had decreased, either somewhat or a lot.

FIGURE 2.7

Changes in Target Occupations' Employment Opportunities since the Start of the TAACCCT Grant



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Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–16.

Notes: N=575; 15 missing respondents.

Although not shown in the figure, these results were largely consistent across the two rounds, with slight shifts between categories. For example, the share of colleges indicating that employment opportunities in targeted occupations had “increased a lot” in their region was about 6 percentage points higher for Round 2 colleges compared with Round 1 colleges. In contrast, the proportion of respondents indicating opportunities had “increased somewhat” was about 3 percentage points lower for Round 2 colleges (leaving the share of colleges reporting an “increase” of about the same).⁴³

Credits, credentials, and transfer and articulation agreements. DOL emphasized the development of education and training programs that allowed participants to gain academic credit based upon

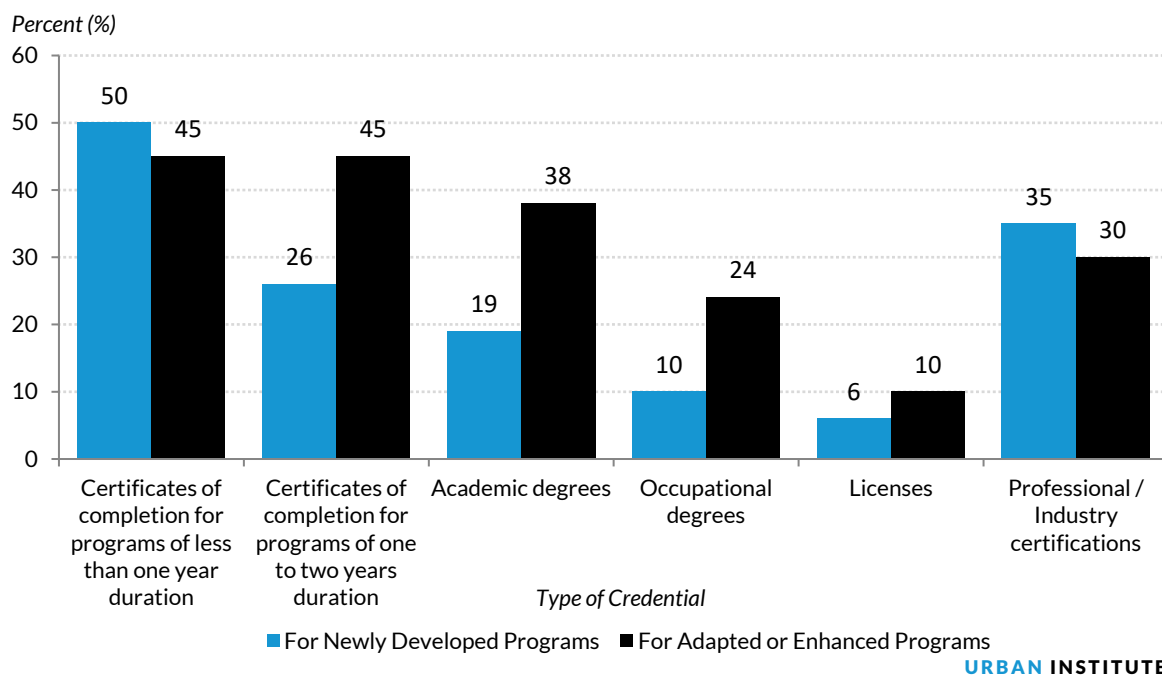
⁴³ See appendix table E.7 for more detail.

participation. This includes programs that lead to credits earned by participants for both academic and occupational training and result in degrees and certificates. Some colleges had more than one program covered by their grants. Over three-quarters of the programs implemented with grant funding in Rounds 1 and 2 resulted in credits earned by participants upon completion.

As shown in figure 2.8, whether the program was newly developed or an existing program that was enhanced or expanded, programs were most likely to award certificates of completion for programs that lasted for one year or less (50 percent of newly developed and 45 percent of enhanced existing training programs). Of the newly developed training programs, about one-third resulted in professional/industry-recognized certifications; about a quarter resulted in certification of completion for programs lasting one to two years; and nearly one-fifth led to academic degrees. A similar breakdown for programs enhanced with grant funding, with many of these programs also leading to academic degrees, professional/industry certifications, and occupational degrees.⁴⁴

FIGURE 2.8

Types of Credentials for Education and Training Programs Developed or Enhanced Using TAACCCT Funding



Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–16.

Notes: N=555; 35 missing respondents.

⁴⁴ See appendix table E.8 for more detail.

The grant announcement prioritized the development of transfer and articulation agreements and policies intended to help participants accumulate credits toward graduation and to facilitate transfer from two- to four-year institutions. As discussed earlier, 41 percent of colleges implemented transfer and articulation activities as a part of their education and training strategies. Table 2.3 provides a detailed look at transfer and articulation policies and agreements implemented by colleges. Nearly 40 percent of colleges established articulation agreements from certificate to degree programs. Nearly a third of colleges established transfer and articulation agreements between their institutions and four-year institutions, rather than other community colleges. Over a third of colleges did not develop any new transfer and articulation policies or agreements.

TABLE 2.3

New Transfer and Articulation Policies and Agreements Implemented Using TAACCCT Funding

Transfer and Articulation Policy or Agreement	Number	Percent
Articulation between certificate programs and degree programs	206	39%
No new types of transfer and articulation policies or agreements	184	35%
New transfer policies/agreements with four-year institutions	165	31%
Other transfer and articulation agreements	43	8%

Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–16.

Notes: N=529; 61 missing respondents.

Student Supports

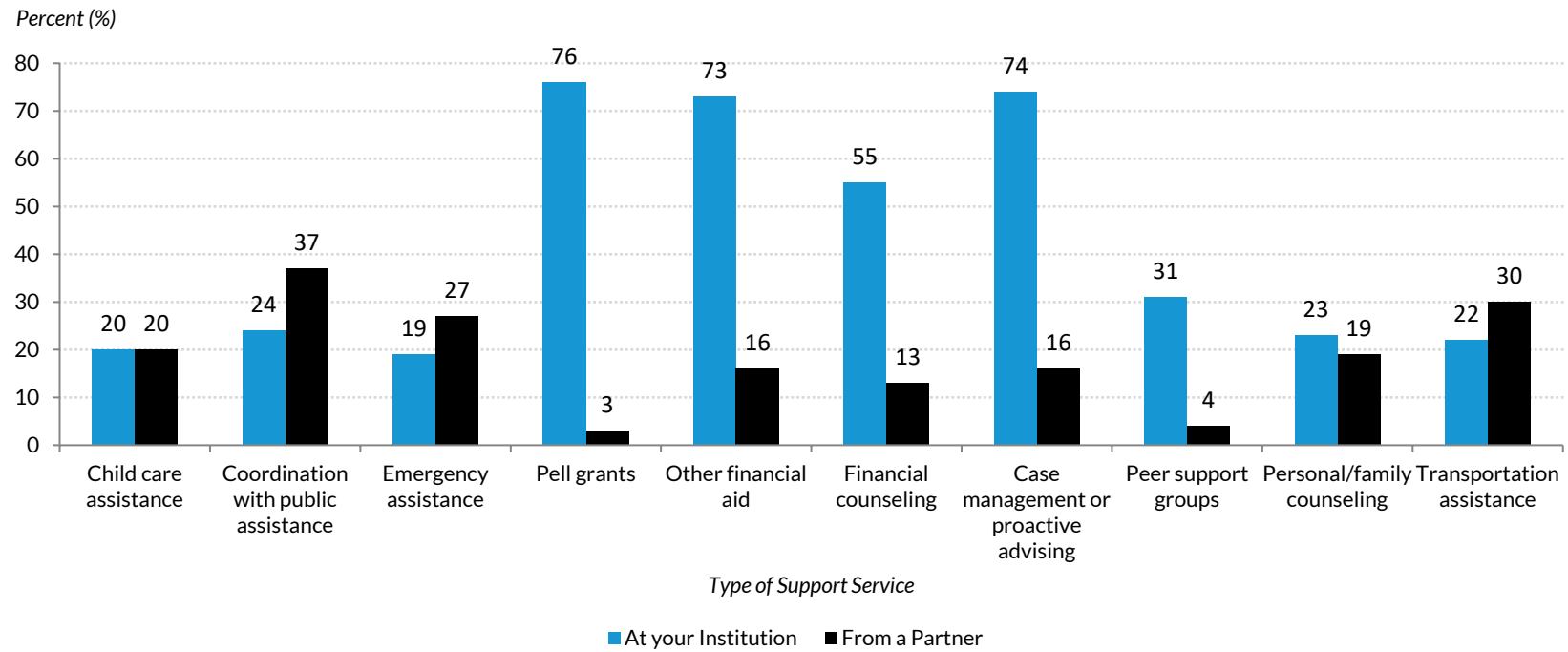
As a part of their grant activities, DOL encouraged colleges to provide participants with access to academic and nonacademic support services, including career and employment services. By improving access to supportive services, it was anticipated that participants would experience fewer barriers to completion of their programs and finding jobs in their occupation of training. This section describes the services colleges and their partners leveraged for participants.

Support services. The most common support services colleges reported leveraging for participants included Pell grants (76 percent), case management or proactive advising (74 percent), and other financial aid (73 percent). That colleges leveraged Pell grants and other financial aid was not unexpected as grant funding could not be used to directly pay for tuition. Over half of colleges capitalized on existing financial counseling for participants. About a third of colleges leveraged existing peer support groups for participants. Less than a quarter of colleges used existing services to facilitate coordination with public assistance, personal/family counseling, and transportation, child care, and emergency assistance. Five percent of colleges indicated that they did not provide any support services.⁴⁵

⁴⁵ See appendix table E.9 for more detail.

FIGURE 2.9

Existing Support Services Leveraged for TAACCCT Participants



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Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–16.

Notes: N=560; 30 missing respondents.

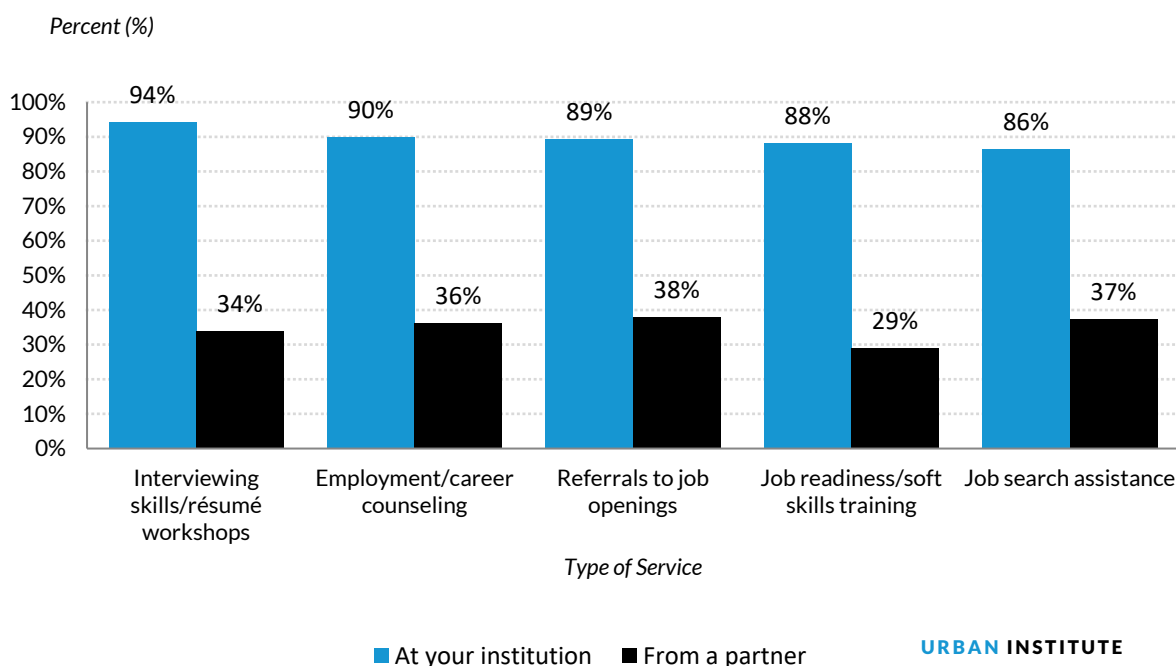
The colleges' partners also provided support services to participants. The most common types of support services partnerships included coordination with public assistance (37 percent), transportation assistance (30 percent), and emergency assistance (27 percent). These three support services were also the only types for which the colleges indicated leveraging partners' available services at a higher percentage than the colleges themselves. These results may be due to the prohibition of colleges using grant funds to support these types of services.

In all categories of support services, Round 1 colleges indicated partners provided support services to a greater extent than Round 2 colleges. Only with case management and proactive advising did Round 2 colleges indicate a slightly higher use of outside partner support.

Employment services. The most common form of career or employment service that colleges offered was interviewing skills/résumé workshops (94 percent) (see figure 2.10). Over four-fifths of colleges reported offering a considerable range of other career and employment services to participants, including employment/career counseling, referrals to job openings, job readiness/soft skills training, and job search assistance.

FIGURE 2.10

Career and Employment Services Provided to TAACCCT Participants



Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–16

Notes: N=570; 20 missing respondents.

Comparing Rounds 1 and 2 TAACCCT colleges, there were some slight differences in the percentage of colleges providing career and employment services. For example, colleges providing job search assistance increased from Round 1 to 2 (from 83 percent to 90 percent), as well as those providing referrals to job openings (from 87 to 92 percent). Additionally, colleges reported that a third to two-fifths of partners provided career and employment services to participants (figure 2.10). The most common career and employment services provided by partners were referrals to job openings, job search assistance, and employment/career counseling. As discussed in greater detail later in this report, based on data collected during the site visits, one important partner in providing such services was the public workforce system, particularly American Job Centers. Colleges provided many of these same services prior to receipt of their grants or were able to expand their career and employment services because of their grant. There was little difference in partner utilization between rounds for the provision of career and employment services, except with respect to the provision of interviewing skills/résumé workshops. The percentage of Round 2 colleges indicating that partners provided interviewing skills/résumé workshops was 8 percentage points higher than for Round 1 colleges.⁴⁶

2.3. Serving TAACCCT Participants

This section first discusses how the Rounds 1 and 2 TAACCCT colleges recruited participants. Colleges targeted a variety of groups for recruitment, using multiple methods. Some colleges also had eligibility requirements for program enrollment.

The section also provides an understanding of the average number of participants that the Rounds 1 and 2 colleges enrolled and helped to complete their programs of study and find employment. DOL tracked this information on participants at the grantee level for performance reporting, which could be across multiple colleges.⁴⁷ The information presented here is not intended to replicate the performance reports but to provide a better understanding of participant information at the college level at one point in time.⁴⁸

⁴⁶ See appendix table E.10 for more detail.

⁴⁷ For more information from the Rounds 1 and 2 grant announcements on performance reporting, see “Applicant Information,” Trade Adjustment Assistance Community College and Career Training Grant Program, last updated December 11, 2015, <https://www.doleta.gov/taaccct/applicantinfo.cfm>.

⁴⁸ Readers should not use the participant numbers provided in this report to compare to performance numbers published by DOL. While the college survey uses similar measures to DOL performance reporting, the survey collected participant information by college, rather than grantee, and at one point in time, when the college completed the survey. DOL performance reporting occurs annually at the end of each program year for the grants.

These are key findings from this section:

- Types of individuals targeted for recruitment varied across colleges. The colleges most often targeted unemployed/dislocated workers and veterans (87 percent for both groups). At least three-quarters of the colleges actively recruited and targeted groups falling into the following categories: TAA-eligible workers, underemployed, low-income/disadvantaged individuals, and individuals with low skill or education.
- Commonly utilized methods of outreach and recruitment included distribution of flyers, posters or other self-produced educational/informational materials; referrals from the workforce system; partnerships with employers and industry associations; in-person presentations in the community; and informational websites.
- Across Rounds 1 and 2, colleges enrolled an average of 398 participants in grant-funded education and training programs. Participants made progress in their programs and many of them experienced successful educational outcomes. The average number of participants that had successful educational outcomes by college were:
 - 165 per college completed their grant-funded program;
 - 133 per college were still retained in their program of study or another grant-funded program;
 - 382 per college completed credit hours;
 - 177 per college earned credentials of any type; and
 - 38 per college enrolled in further education after program completion.
- Colleges sought to help participants find and retain jobs as a part of grant-funded programs. Some participants were unemployed when enrolling; others were employed but wanted to improve their skills. These averages are an early picture of employment outcomes for participants as reporting on employment often lagged by six months or more. The average early employment results by college showed:
 - 74 not employed at enrollment per college were employed after grant-funded program was completed;
 - 55 employed at enrollment per college received a wage increase after enrollment;
 - 52 per college retained employment after program completion.

Participant Recruitment

Meeting enrollment goals under the grants usually required active outreach to inform and encourage enrollment of targeted populations. This section of the report discusses the types of participants that were targeted for enrollment, eligibility requirements for enrollment, various recruitment and outreach efforts employed by colleges, and the effectiveness of techniques used.

Types of participants targeted for TAACCCT activities. DOL required that colleges recruit and serve a “diverse population of workers eligible for training under the TAA for Workers program,” and encouraged them to serve a wide range of adults, including unemployed/underemployed, dislocated

workers, and veterans.⁴⁹ As shown in figure 2.11, the most commonly recruited groups of individuals across the colleges were unemployed/dislocated workers and veterans (87 percent of colleges targeted these two groups). Furthermore, at least three-quarters of colleges actively recruited and targeted groups falling into the following categories: TAA-eligible, underemployed, low-income/disadvantaged, and low-skill or education during both rounds. In addition, some colleges targeted by gender to recruit for occupation where men or women might be underrepresented, such as men in nursing or women in the trades. There were slight but not substantial differences in the targeting of specific populations between Rounds 1 and 2. Figure 2.11 also shows that many of the colleges began targeting these groups after the grant began.⁵⁰

TAACCCT eligibility requirements. While DOL did not have specific requirements for participation in grant-funded education and training programs, colleges often had their own eligibility requirements for non-TAA-eligible participants to enroll their programs. Over three-quarters (78 percent) of colleges required high school diplomas or GEDs for non-TAA-eligible individuals to enroll in their programs. Some colleges did not require high school credentials if they implemented the Integrated Basic Education and Skills Training (I-BEST) model, where students with adult basic education needs are coenrolled in and receive both basic skills and technical instruction to accelerate progress through a program of study.⁵¹

Furthermore, slightly more than half (52 percent) of colleges required completion of college entrance exams (such as Scholastic Aptitude Test [SAT], American College Test [ACT], and COMPASS test) as an enrollment requirement for non-TAA participants. Other types of enrollment requirements included: basic skills tests (e.g., Test of Adult Basic Education [TABE], Comprehensive Adult Student Assessment Systems [CASAS], and Basic Education and Skills Training [BEST]), intake interview, aptitude test, background check, and/or drug test.⁵²

⁴⁹ With regard to targeting the grant on certain populations, the Round 1 grant announcement states the following: “The TAACCCT provides community colleges and other eligible institutions of higher education with funds to expand and improve their ability to deliver education and career training programs that can be completed in two years or less, are suited for workers who are eligible for training under the Trade Adjustment Assistance for Workers program, and prepare program participants for employment in high-wage, high-skill occupations. The targeted population of this program is workers who have lost their jobs or are threatened with job loss because of foreign trade.” The grant announcement is available at: <https://www.doleta.gov/grants/pdf/SGA-DFA-PY-10-03.pdf>.

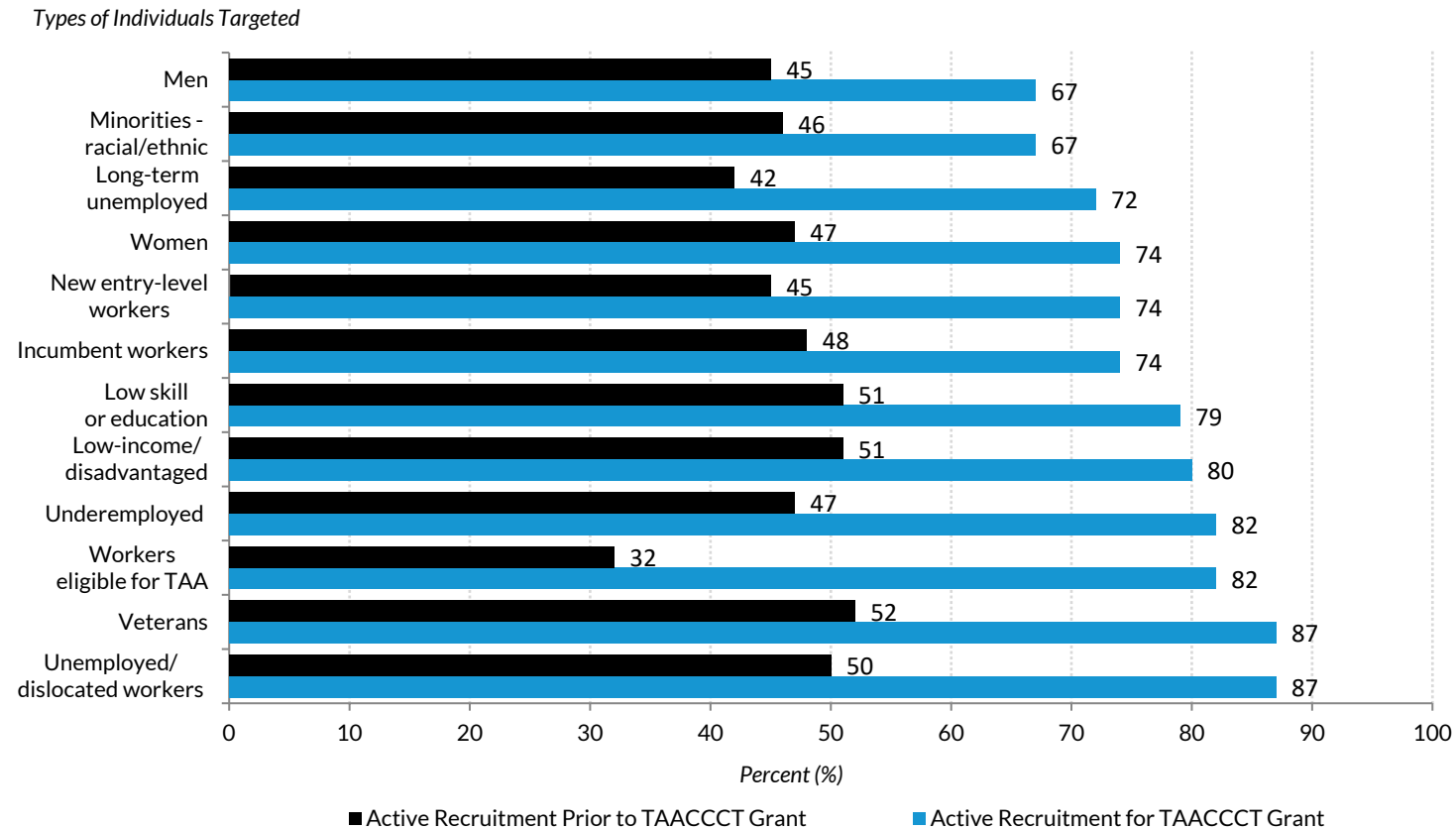
⁵⁰ See appendix table E.11 for more detailed information.

⁵¹ See appendix table E.12 for more detailed information.

⁵² For definitions of these tests, please refer to the glossary at the beginning of the report.

FIGURE 2.11

Groups of Individuals Actively Recruited or Targeted by Rounds 1 and 2 TAACCCT Colleges and Whether Group Was Previously Recruited or Targeted (Prior to TAACCCT Grant)



URBAN INSTITUTE

Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–16.

Notes: N=568; 22 missing respondents. Percentages do not add to 100 percent. Respondents could provide more than one response.

Outreach and recruitment methods. Colleges reported the specific types of outreach and recruitment strategies they implemented. As shown in table 2.4, during Rounds 1 and 2, over three-quarters of colleges used distribution of flyers, posters or other self-produced educational/informational materials, referrals from the public workforce system, partnerships with employers and industry associations, in-person presentations in the community (e.g., at schools, neighborhood centers, libraries), and informational websites as recruitment strategies. Only 5 percent of colleges indicated that they did not employ any type of recruitment strategy. Colleges rated partnerships with employers and industry associations, in-person presentations in the community, and referrals from the public workforce system as effective recruiting strategies.⁵³

TABLE 2.4

Outreach and Recruitment Strategies Used by Rounds 1 and 2 TAACCCT Colleges

Type of Outreach/Recruitment Strategy Used	Number	Percent
Distribution of flyers, posters, or other self-produced educational/informational materials	537	91%
Referrals from the workforce system	512	87%
Partnerships with employers and industry associations	503	86%
In-person presentations in the community (e.g., at schools, neighborhood centers, libraries)	496	85%
Informational websites	448	76%
Media outreach campaigns (e.g., TV, radio, newspapers, professionally prepared ads on buses/bus shelters)	353	60%
Referrals from community- or faith-based organizations	299	51%
Direct mail campaigns	214	37%
Door-to-door outreach	42	7%
Toll-free information hotlines	29	5%
Did not have a recruitment strategy	25	5%
Other	90	5%

Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–16.

Notes: N=577; 13 missing respondents. Percentages do not add to 100 percent. Respondents could provide more than one response.

Across the colleges, the greatest challenges and barriers to recruitment and enrollment included: difficulties with identifying and finding eligible participants (19 percent); conflicts between work and school hours (17 percent); low or inadequate basic skill levels of applicants (17 percent); participants' lack of access to reliable transportation (14 percent); tuition costs (14 percent); and child care (13 percent).⁵⁴

⁵³ See appendix tables E.13 for more detail

⁵⁴ See appendix table E.14 for additional details

Understanding TAACCCT Participants' Progress by TAACCCT College

The section provides an understanding of the average number of participants that the Rounds 1 and 2 TAACCCT colleges enrolled and helped to complete their programs of study and find employment. DOL tracked information on participants at the grantee level for performance reporting, which could be across multiple colleges for consortium grants.^{55, 56} The outcome measures captured enrollment, educational progress, and employment. To take a more in-depth look at participant information at the college level, the survey asked colleges to provide information on their individual institutions' progress to date on enrollment, educational progress, and employment. The information presented here is not intended to replicate the performance reports but to provide a better understanding of participant information at the college level at one point in time.⁵⁷

Outcomes for the two rounds are presented here, but they are drawn at different points during the four-year period of performance.⁵⁸ Round 1 colleges had completed their periods of performance prior to survey administration, whereas Round 2 colleges had seven months remaining. In both rounds, consortia member colleges oftentimes indicated that they were not able to provide disaggregated results for their institutions. Thus, reported outcomes from the colleges may be underestimates of ultimate performance as collected by DOL due to nonresponse on individual outcome measures, the timing of survey administration, or not being able to obtain access to disaggregated data for some member colleges. However, these results are reported to provide a broad understanding of the degree to which participants made progress toward educational and employment outcomes, rather than at the grantee level as collected by DOL.

Table 2.5 shows the results to date on nine key outcome measures, presenting total number of participants and average number of participants per college. Across 478 responding colleges, there were 190,258 total unique participants enrolled by the colleges as of the survey date. The average number of participants across the colleges was 398. Single-institution grantees enrolled an average of

⁵⁵ For more information from the Rounds 1 and 2 grant announcements on performance reporting, see "Applicant Information," Trade Adjustment Assistance Community College and Career Training Grant Program, last updated December 11, 2015, <https://www.doleta.gov/taaccct/applicantinfo.cfm>.

⁵⁶ For more information on preliminary findings from the annual performance data, see Early Results from the TAACCCT Grants, the fourth brief in a series about the TAACCCT grant program. It can be found at <http://www.urban.org/research/publication/early-results-taaccct-grants>.

⁵⁷ Readers should not use the participant numbers provided in this report to compare to performance numbers published by DOL. While the college survey uses similar measures to DOL performance reporting, the survey collected participant information by college, rather than grantee, and at one point in time, when the college completed the survey. DOL performance reporting occurs annually at the end of each program year for the grants.

⁵⁸ Round 1 grants originally had three-year grant periods. DOL allowed grantees to extend the period of performance to four years. Nearly all grantees extended their grant periods, but several grantees chose to end their grants prior to the end of four years.

484 participants and member colleges enrolled an average of 385 participants. Potentially due to the timing of the survey, Round 1 colleges had enrolled more participants on average (417 per college) than Round 2 colleges (395 per college).⁵⁹

TABLE 2.5

Results to Date for Rounds 1 and 2 TAACCCT Colleges on Key Participant Outcome Measures

Outcome goals	Average number of TAACCCT participants
Total unique TAACCCT participants served/enrolled	398
Total number of participants who have completed a TAACCCT-funded program	165
Total number of participants still retained in their program of study or another TAACCCT-funded program	133
Total number of participants completing credit hours	382
Total number of participants earning credentials	177
Total number of participants enrolled in further education after grant-funded program of study completion	38
Total number of participants employed after grant-funded program of study completion	74
Total number of participants retained in employment after program of study completion	52
Total number of those participants employed at enrollment (for purposes of this reporting, “incumbent workers”) who receive a wage increase after enrollment	55

Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–16

The table also shows the progress participants made in their programs and many of them experienced successful educational outcomes. At the time of the survey, the average number of participants that had successful educational outcomes by college were:

- 165 participants per college completing their grant-funded program;
- 133 participants per college still retained in their program of study or another grant-funded program;
- 382 participants per college completing credit hours;
- 177 participants per college earning credentials of any type; and
- 38 participants per college enrolled in further education after program completion.

Many participants at these colleges were either able to complete their program or continue in their current program or another grant-funded program. Fewer went on to enroll at another institution. However, these numbers may indicate that a significant portion of participants were making progress along a career pathway. Many participants were awarded credits, which may reflect the development or enhancement of for-credit programs and the use of PLAs to award college credit.

⁵⁹ See appendix tables E.15 and E.16 for additional information.

Table 2.5 also highlights the early employment results for participants. As of the survey date, these colleges saw:⁶⁰

- 74 participants per college employed after grant-funded program of study completion;
- 52 participants per college retained in employment after program completion; and
- 55 participants per college employed at enrollment (for purposes of this reporting, “incumbent workers”) who receive a wage increase after enrollment.

These numbers may not capture other possible employment outcomes, such as finding employment prior to program completion. They may also not fully capture employment after program completion if there was a lag in reporting or if employment occurred outside the observation window. The numbers also do not provide information on whether participants found employment in their occupation of training, a limitation of many of these studies. These outcomes underestimate actual employment numbers due to the timing of the survey (before the Round 2 grants ended) and the availability of employment data. The average numbers will rise at the end of the grant for Round 2 colleges. In addition, employment numbers will likely increase after the end of the grant when participants who continued with their education complete it and find new jobs. However, the data give a general sense of the number of participants each college could help find or maintain their jobs at that point in time. Findings from the Round 4 outcome study will provide more detailed information on employment outcomes of participants.

2.4. TAACCCT Partnerships

As highlighted in the grant announcements for the TAACCCT grants, community colleges have a long history of “crossing traditional boundaries” and collaborating with a wide range of partners, both within their institutions and throughout their communities, to develop and adapt programs to best meet the needs of the participants served. This section summarizes survey findings for Rounds 1 and 2 TAACCCT colleges regarding both internal and external partnerships, as well as the services provided through these partnerships as part of their local projects. It also highlights the sustainability and successes of the partnerships.

⁶⁰ The measures used for the evaluation may not align with the official TAACCCT performance measures. Survey participants were asked to provide data on the number of participants employed, retained, and received wage increases. Under TAACCCT performance reporting requirements, which may differ from survey responses, the only participants who could be counted as employed were those who were not employed anywhere at enrollment and were subsequently employed *after* completing at least one grant-funded program of study and exiting the institution. Under TAACCCT performance reporting requirements, participants who were employed (anywhere) at enrollment were tracked only for wage increases, not subsequent employment.

These are the key findings from this section:

- About two-thirds of colleges reported expanding existing—or creating new partnerships with—other workforce/career and technical education departments, financial aid, or college administration.
- High levels of colleges (at least 70 percent) also identified other internal departments and offices that offered services to participants, which could include academic support and tutoring; access/referral to support services; job search assistance; career navigation and information; participant recruitment/outreach; financial counseling and aid; counseling on program selection/enrollment; and program development.
- New and expanded partnerships outside of the grant-facilitating organization most often included industry associations, employers, or chambers of commerce; followed by local workforce development boards/American Job Centers; and career and job centers other than American Job Centers.
- The public workforce system was a key provider of services to participants (only 8 percent of respondents noted receiving no resources or services from the public workforce system). Colleges most commonly received from the public workforce system referrals; connections to employers; access to financial support for participants; job placement services; and career or skill services such as counseling and assessment.
- Most colleges reported that they would continue their grant activities at the same intensity after the grants would end. Over a quarter indicated that they would provide some types of services at a greater intensity than under the grant, including career services, adult education/remedial education services, other academic departments, student support services, and information technology (IT)/computer services.
- Over 80 percent of colleges indicated they were somewhat or very successful in working with partners while making program changes, in communicating with partners, and believed that they were somewhat or very successful in engaging partners throughout the grant period.
- Two-thirds or more of colleges indicated they had been somewhat or very successful in engaging partnerships with secondary schools and institutions of higher education, the public workforce system, and industries and employers.

Partnering within the College

About two-thirds of colleges reported that they had expanded current partnerships or developed new partnerships with other workforce/career and technical education departments, financial aid, or college administration within their organizations facilitating their grants. These were followed by new or expanded partnerships with career and student support services, which were reported by over half of the colleges. The prevalence of these internal collaborations may be, in part, in response to evidence (referred to in the grant announcement) that improving student services can result in “increased persistence [among participants] in the short-term.”⁶¹

⁶¹ See appendix tables E.17 and E.18 for more detail.

Table 2.6 provides information on the types of resources and services made available to participants by other departments and offices within their institutions. The most frequently reported (at least 70 percent of colleges) were academic support and tutoring; access/referral to support services; job search assistance; career navigation and information; participant recruitment/outreach; financial counseling and aid; counseling on program selection/enrollment; and program development.

TABLE 2.6

Resources and/or Services Provided to TAACCCT Participants by Departments or Offices within Rounds 1 and 2 TAACCCT Colleges

Type of Support Provided	Number	Percent
Academic support and tutoring	489	83%
Access/referral to support services	468	79%
Job search assistance	460	78%
Career navigation and information	453	77%
Participant recruitment/outreach	453	77%
Financial counseling and aid	442	75%
Counseling on program selection/enrollment	425	72%
Program development (e.g., career pathways, course sequencing, modularization of courses, incorporation of technology-enabled tools, internships)	413	70%
Enrollment processes	407	69%
Curriculum development (instructional design and content)	379	64%
Testing for college readiness	359	61%
Remediation	322	55%
Leadership/oversight	295	50%
Purchase and operation of technology-enabled learning tools	283	48%
Development of articulation agreements	236	40%
Development of PLAs	224	38%
Assistance with tuition waivers	185	31%
Other	19	3%

Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–16.

Notes: N=562; 28 missing respondents.

Partnering with Outside Organizations and Industry

Most colleges reported having an unchanged partnership, an enhanced preexisting partnership, or a newly developed partnership with numerous external organizations during the grant period. These external organizations included employers and industry representatives, public workforce system organizations (i.e., local workforce development boards and American Job Centers), secondary and postsecondary institutions, other training providers, government agencies, and philanthropy.

As shown in table 2.7, many colleges enhanced current partnerships or developed new partnerships most often with industry associations, employers, or chambers of commerce (73 percent), followed by

local boards and American Job Centers (60 percent), and career and job centers other than American Job Centers (55 percent).⁶²

TABLE 2.7

Types of External Organizations with Which Rounds 1 and 2 TAACCCT Colleges Expanded Current or Developed New Partnerships

Type of External Partner	Number	Percent
Industry associations, employers, or chambers of commerce	430	73%
Local workforce development boards / American Job Centers	356	60%
Career or job centers (other than American Job Centers)	306	55%
Community-based organizations or other social services agencies	306	52%
School districts (K-12)	275	47%
Economic development organizations	272	46%
Community or technical colleges other than those in your consortium (if applicable)	238	40%
State workforce investment boards	237	40%
Universities or other four-year institutions	229	39%
Local government	187	32%
State government agencies	187	32%
Philanthropic community	143	24%
Vocational or trade schools	136	23%
Faith-based organizations	88	15%
Unions	63	11%
Seed and venture capital organizations or individuals, investor networks, or entrepreneurs	44	7%
Other	7	1%

Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–16.

Notes: N=590; 0 missing respondents.

As a key partner to the TAACCCT colleges, the public workforce system (including workforce development boards and American Job Centers) provided a wide array of services and activities to TAACCCT participants. As shown in table 2.8, the most frequently cited role for the American Job Centers was as a referral source. Other common services included providing connections to employers; access to financial support for participants (e.g., individual training accounts); job placement services; and career or skill services such as counseling and assessment. Only 8 percent of colleges indicated receiving no resources or services from the public workforce system.

There were a few differences between the two rounds on reported receipt of resources or services provided by the public workforce system. First, the percentage of colleges indicating that they received career or skill assessments, decreased from 52 percent in Round 1 to 46 percent in Round 2. Additionally, the percentage of colleges indicating that they received TAA program services (e.g., case management) decreased from 41 percent in Round 1 to 32 percent in Round 2. Facility use (e.g., space

⁶² See appendix table E.19 for more detail.

for training activities, meetings with employers, job fairs)—the only category to show a notable increase between Rounds 1 and 2, jumped from 21 percent to 28 percent.

TABLE 2.8

Resources and/or Services Provided by the Public Workforce System for TAACCCT Participants at TAACCCT Colleges

Type of Resources and/or Services Provided	Number	Percent
Referrals to your institution's TAACCCT programs	393	73%
Access to financial support for participants	279	52%
Connections to employers or industry associations	279	52%
Job placement services	277	51%
Career or skill assessments	263	49%
Advisory committee/steering committee participation	219	40%
Job readiness/soft skills training	199	37%
TAA program services (e.g., case management)	197	36%
Use of facilities (e.g., space for training activities, meetings with employers, job fairs)	131	24%
Use of staff as counselors/navigators	129	24%
Direct funding/training contracts	100	18%
Mentoring	76	14%
Internships or other work experience activities	67	12%
None	45	8%
Referral to or assistance developing registered apprenticeships	42	8%
Operation of training activities	39	7%
Curriculum development	34	6%
Other	27	5%

Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–16.

Notes: N=541; 49 missing respondents.

Sustainability of Partnerships

Because the TAACCCT grant program provides funding for a limited period (i.e., four years), colleges were strongly encouraged to take steps to determine which innovations, strategies, and activities were effective and to develop plans for integrating and institutionalizing these practices into ongoing operations. Career services and IT/computer services were the most common that colleges responding to the survey indicated that they would “definitely continue” providing those services with their partners once the grant funding ended. Overall, colleges were far more likely to indicate that they “definitely will continue” or were “likely to continue” as opposed to “not likely to continue” or “definitely will not continue” these services for participants after the grant ended.⁶³

Most colleges reported that they would continue these grant-funded efforts with their partners at the same intensity after the grants ended, although over a quarter indicated that they would provide

⁶³ See appendix table E.20 for more detail.

some types of services at a greater intensity than during the grant, including career services (35 percent); adult education/remedial education services (33 percent); other academic departments (32 percent); student support services (31 percent); and IT/computer services (26 percent).⁶⁴

Partnership Successes

Colleges were urged through the grant announcement to develop and sustain partnerships with educational, community, and employer/industry partners. These partnerships were vital for providing program participants with training and support services. Employer/industry partnerships were crucial to placing participants in employment, and colleges were advised to form connections with multiple employers to increase placement rates and quality. Colleges were asked about the degree to which they thought they successfully interacted with partners during the grant period. Almost two-thirds of colleges (64 percent) believed that they were either somewhat or very successful in accessing resources they had planned on leveraging.⁶⁵ Additionally, while implementing programing, colleges believed they were mostly either “somewhat” or “very” successful in working with partners while making program changes (85 percent) and in communicating with partners (89 percent). The majority (88 percent) of colleges also believed that they were “somewhat” or “very” successful in engaging partners throughout the grant period; 2 percent or less of all colleges rated themselves as unsuccessful in any of the previous categories.

Partnerships were important in successfully serving participants and ensuring positive programmatic outcomes. Colleges thought they were largely successful in supporting and strengthening partnerships across the various sectors they worked with under the grant.⁶⁶ Colleges believed they had been “somewhat” or “very” successful in engaging secondary schools (i.e. high schools) (78 percent) and institutions of higher education (i.e. four-year colleges and universities and community and technical colleges) (71 percent). Nearly two-thirds (65 percent) of colleges believed that they had done a “somewhat” or “very good” job in strengthening and maintaining relationships with the public workforce system.

⁶⁴ See appendix table E.21 for more detail.

⁶⁵ See appendix table E.22 for more detail.

⁶⁶ See appendix table E.23 for more detail.

3. Understanding TAACCCT Grant Implementation: Lessons from Fieldwork to 17 Colleges in Round 2

This chapter provides an in-depth examination of 17 Round 2 TAACCCT colleges and their local grant projects as a part of 10 Round 2 grants, to which the national evaluation team conducted site visits from February to April 2016. The 17 colleges visited included single-institution grant colleges, lead consortium colleges, and consortium-member colleges. Table 3.1 presents the names of the 17 colleges visited and the 10 grants in which they participated. The data collected during this fieldwork provide a detailed understanding of how selected lead colleges and their consortium-member colleges and single institution grant colleges implemented their grant activities, as well as the successes and challenges they experienced.⁶⁷

TABLE 3.1

Round 2 TAACCCT Colleges Visited, State, Grantee, and Grant Project

TAACCCT College	State	Grantee	Grant Project Name
Monroe Community College (Monroe)	New York	Monroe Community College	<i>SUNY Training and Education in Advanced Manufacturing (SUNY TEAM)</i>
Cayuga Community College (Cayuga)	New York	Monroe Community College	<i>SUNY Training and Education in Advanced Manufacturing (SUNY TEAM)</i>
New England Institute of Technology (NEIT)	Rhode Island	New England Institute of Technology	<i>Shipbuilding/Marine Advanced Manufacturing Institute (SAMII)</i>
Northern Virginia Community College (NOVA)	Virginia	Northern Virginia Community College	<i>Credentials to Careers (C2C)</i>
Shoreline Community College (Shoreline)	Washington	Northern Virginia Community College	<i>Credentials to Careers (C2C)</i>
Roane State Community College (Roane State)	Tennessee	Roane State Community College	<i>Prescription for Training Health Care Workers in Tennessee (Rx for Tennessee)</i>
Northeast State College (Northeast State)	Tennessee	Roane State Community College	<i>Prescription for Training Health Care Workers in Tennessee (Rx for Tennessee)</i>

⁶⁷ See appendix C for more details on the site visit data collection conducted as a part of the implementation study.

TAACCCT College	State	Grantee	Grant Project Name
Bismarck State College (Bismarck State)	North Dakota	Bismarck State College	<i>Training for Regional Energy in North Dakota (TREND)</i>
Turtle Mountain Community College (Turtle Mountain)	North Dakota	Bismarck State College	<i>Training for Regional Energy in North Dakota (TREND)</i>
Bossier Parish Community College (Bossier Parish)	Louisiana	Bossier Parish Community College	<i>Retraining the Gulf Coast Workforce through IT Pathways (GCIT)</i>
Meridian Community College (Meridian)	Mississippi	Bossier Parish Community College	<i>Retraining the Gulf Coast Workforce through IT Pathways (GCIT)</i>
Vincennes University (Vincennes)	Indiana	Vincennes University	<i>Logistics Training and Education Center Initiative (LTEC)</i>
Central Lakes College Consortium (Central Lakes)	Minnesota	Central Lakes Community College	<i>The Advanced Manufacturing Education Alliance (AME Alliance)</i>
St. Cloud Technical & Community College (St. Cloud)	Minnesota	Central Lakes Community College	<i>The Advanced Manufacturing Education Alliance (AME Alliance)</i>
Laney College (Laney)	California	Los Medanos College/4CD	<i>Design It-Build It-Ship It (DBS)</i>
Contra Costa Community College (Contra Costa)	California	Los Medanos College/4CD	<i>Design It-Build It-Ship It (DBS)</i>
Edmonds Community College (Edmonds)	Washington	Edmonds Community College	<i>Progressive, Accelerated Certifications for Employment in Information Technology (PACE-IT)</i>

Source: TAACCCT grantee database and Round 2 site visit interviews, 2016.

Notes: Shortened names of TAACCCT colleges are provided in parentheses. These shortened names are used throughout the chapter.

3.1. Targeted Industries

As discussed in chapter 2, Rounds 1 and 2 TAACCCT colleges targeted a variety of industries and occupations. In targeting industry sectors, project directors indicated that their local projects were designed to be responsive to local and regional economies and employer needs, high demand for skilled workers, and broader demographic and policy changes affecting the US economy. This section presents the targeted industries by 17 colleges implementing their local projects.

These are the key findings from this section:

- Seven colleges trained participants for occupations in advanced manufacturing industries that were in demand in the local area and had projected job growth for workers, based on labor

market data or input from local employers. Other colleges concentrated on specific subindustries within advanced manufacturing based on the local or regional economy, such as shipbuilding, aerospace, optics, and biotechnology.

- Five of the 7 colleges also targeted advanced manufacturing in response to high demand for workers. Employers played a large role in identifying the occupations for the local projects. Colleges responded to employer concerns about the impending demand for workers as the current workforce retired.
- Four colleges focused on IT and related occupations as there was high demand for entry-level and highly skilled IT professionals in their local areas, including computer support, web development, technology and integration support, and network or cyber security, according to the project directors. Different types of employers required IT professionals, broadening the scope of skills training across industry sectors to include health care, retail, manufacturing, government, and education.
- Working in partnership with local employers, two colleges that targeted entry-level training in supply chain and logistics and warehouse operations designed programs that could be completed relatively quickly, to make them attractive to participants and enabling the programs to meet the demand for workers at a faster pace.
- Two colleges that were part of a statewide consortium focused on the need for workers in the health care field, especially in rural areas, in response to health care delivery demand due to changes made under the Patient Protection and Affordable Care Act, according to grant leadership.
- Two colleges that were part of a tribal college consortium focused on the energy industry, especially oil and gas. Located in North Dakota, these colleges chose to focus on the energy industry because it was “the economic driver of the state.”

As shown in table 3.2, the industries of focus of the colleges visited were advanced manufacturing, IT, supply chain/logistics, health care, and energy and construction. This section describes the types of industries and occupations targeted for the colleges and why they focused their projects on these various industries and occupations.

The colleges had a variety of reasons for selecting the targeted industries. All colleges focused their programs of study on occupations in industries that were in demand in the local area and had projected job growth for workers, based on labor market data or input from local employers. Several staff referred to the targeted industry as the economic driver of the state or local area. Specific employers that had moved to the area or were growing rapidly and having trouble finding employees often motivated the decisions. Demographic trends, such as the aging of the industry’s workforce, were another important factor for targeting a particular industry for least three local projects. Staff also considered which industries were underserved by local training providers. Other reasons cited included 1) high starting wages for the industry’s occupations, 2) the relatively short time needed to provide adequate training and place participants into jobs, and 3) the diversity of employers that needed workers trained in the target industry. The rationales for each targeted industry are discussed next. This section highlights specific examples to illustrate project strategies and contexts.

TABLE 3.2

Industries Targeted by TAACCCT Colleges Visited with Examples of Occupational Fields

Targeted Industries	TAACCCT Colleges	Occupational Fields		
Advanced manufacturing	Monroe, Cayuga, NEIT, Central Lakes, St. Cloud, Laney, Shoreline	Computer-controlled machining	Quality assurance	Machine maintenance
IT	NOVA, Bossier Parish, Meridian, Edmonds	Cybersecurity	Computer programming	Health IT
Supply chain & logistics	Vincennes, Contra Costa	Warehousing	Automotive technology	Forklift operation
Health care	Roane State, Northeast State	Nursing	Phlebotomy	Surgical technology
Energy and construction	Bismarck State, Turtle Mountain	Plant operation	Welding	Carpentry

Source: TAACCCT grantee database and Round 2 site visit interviews, 2016.

Advanced Manufacturing

Advanced manufacturing was the most commonly targeted industry among the colleges. Seven of the 17 colleges, representing five different grants, focused primarily on advanced manufacturing occupations. Each of these projects focused on the industry in response to high demand for workers. For example, in its grant application materials, the *SUNY TEAM* grant proposal included projections from the New York State Department of Labor of 10,000 annual job openings within the advanced manufacturing field between 2012 and 2018. Minnesota, the location of the *AME Alliance*, had seen a resurgence of manufacturing jobs, and college staff and industry partners emphasized that employers in their area were “desperate” for more workers.

Five of the colleges concentrated on specific subindustries within advanced manufacturing based on the local economy. New England Institute of Technology (NEIT), in Rhode Island, primarily trained participants to work for shipbuilding and marine employers, including a major supplier to the US Navy that needed 6,000 employees through 2019. The Puget Sound area was home to Boeing and hundreds of its suppliers, so Shoreline Community College prepared its participants for advanced manufacturing jobs in aerospace. Other specialties within advanced manufacturing were optics (Monroe), plastics (Cayuga Community College), and biotechnology (Laney College). The variety of types of employers that hire for advanced manufacturing occupations made the industry attractive. One of the staff at Laney College said, “The diversity in manufacturing makes it strong. When one part of the industry dips, it may not affect others at the same time.”

At least three of the colleges focused on advanced manufacturing because of the impending demand for workers as the current workforce retired. In its project description, Shoreline Community College noted that Boeing expected 50 percent of machinists in the area to retire in five to ten years, referring to this as a “grey tsunami.”

The advanced manufacturing projects trained for several occupations, most commonly machinists and computer-controlled machine tool operators. Other occupations included welders, industrial machinery mechanics, drafters, and electromechanical equipment assemblers. Employers played a large role in identifying the occupations on which projects focused. For example, Shoreline’s industry advisory board successfully encouraged the college to focus on quality assurance and machine maintenance.

Information Technology

Four colleges focused on information technology and related occupations as there was high demand in their local areas. The Seattle metropolitan area (Edmonds), for example, had experienced strong economic growth in the industry after the 2007-2009 recession. In Northern Virginia (NOVA), there were almost 1,800 information technology employers, many of which were defense contractors in need of cybersecurity professionals. In Louisiana and Mississippi (Bossier Parish and Meridian), declines in the manufacturing industry had been countered by growing demands in information technology, including cybersecurity, computer programming, and health information technology. Higher starting wages were another reason the local projects targeted information technology. In its marketing materials, Edmonds noted the entry- to mid-level wages of database administrators were between \$28.80 and \$47.29 per hour.

Many different types of employers required information technology professionals. For example, Edmonds had diverse employers on its advisory board, including health care, retail, manufacturing, government, and education. One interviewee called information technology a “thread that runs through many of the industries” for which the community colleges can provide training. The prevalence of information technology needs across many types of employers helped member colleges of the GCIT consortium in Louisiana and Mississippi agree to focus on information technology and gave participants many different employer options where they could potentially get jobs.

The four colleges provided training for numerous information technology occupations such as computer support, web development, technology and integration support, network security, and more. Some of the colleges focused on specific occupations based on local demand. For example, NOVA

concentrated on cybersecurity, due to the college's proximity to government contractors in and around Washington, DC. Bossier Parish and Meridian community colleges both emphasized health care-related information technology occupations, such as health information technology and medical records and health information technicians, due to large health care employers in the area.

Supply Chain and Logistics

Two colleges targeted the supply chain and logistics industry: Contra Costa Community College, part of the *DBS* consortium, and Vincennes University, a single-site institution. Both colleges based their decisions on the large number of warehousing employers operating in their area. Indiana (Vincennes) is a distribution hub for large companies such as Amazon; the location enables businesses to reach 80 percent of the continental US in a single day. Known as the "Crossroads of America," one in three residents of Indiana works in advanced manufacturing or logistics. For Contra Costa, several warehousing companies had recently moved to the area, so the project focused on forklift, logistics, operations, and warehouse. Labor market information and input from employers, unions, and college leadership all influenced the decision to focus on these areas. The primary occupation of training for both colleges was warehouse worker or warehouse associate. Staff said that training for these occupations could be completed relatively quickly, making them attractive to participants and enabling the programs to meet the demand for workers at a faster pace.

Health Care

Two colleges focused on health care: Roane State College and Northeast State College, both part of the *Rx for Tennessee* consortium. These projects focused on health care because the industry was a "vital and stable component of the economy in East Tennessee." The colleges had major health care employers in the vicinity, including Mountain States Health Alliance and Wellmont Health Systems. Northeast State had an employer partner that expected to hire 2,000 nurses and other health care workers. Staff at Roane State indicated that there was "tremendous need" for workers in the health care field, especially in rural areas. Another reason for focusing on health care was the increasing demand for workers due to the changes made under the Patient Protection and Affordable Care Act. *Rx for Tennessee* provided training for a range of health care professions, including phlebotomists, medical assistants, surgical technicians, electrocardiogram technicians, and registered nurses, all of which were in demand by employers.

Energy and Construction

Finally, two colleges (Bismarck State and Turtle Mountain, both members of the *TREND* consortium) focused on the energy industry, especially oil and gas. Located in North Dakota, these colleges chose to focus on the energy industry because it was “the economic driver of the state.” In its grant application, the consortium cited continued projected growth in the oil industry through 2025. The consortium focused on occupations in building, construction, and transportation to support this industry. The colleges worked with industry partners to design new programs or enhance existing ones based on employers’ current and future needs. For example, there was high demand for commercial drivers’ license training and certification, so Bismarck State added the license as a required component of their lineworker program.

3.2. TAACCCT Project Designs

The Round 2 grant announcement required that grantees implement five core elements in grant-funded programs of study: evidenced-based design; stackable and latticed credentials; online and technology-enabled learning; transferability and articulation; and strategic alignment.⁶⁸ This section focuses on how the 17 colleges designed their local projects to reflect these core elements. This section also highlights the many components of the projects: career pathways, program curricula, learning modalities, use of online and technology-enabled learning for the programs adopted, and transfer and articulation policies/agreements between partner colleges and other institutions of higher education. A later section on partnerships explores strategic alignment between these and other key stakeholders as a core element of the grants.

These are the key findings from this section:

- All of the colleges used contextualized learning interventions, and 12 used various forms of modularized learning. Colleges also packaged multiple evidence-based components into their programs, such as team teaching, student supports, and industry alignment. Five colleges replicated the I-BEST model, which combines basic skills and technical instruction in the classroom. The I-BEST model was well-suited to address the basic skills or remedial education needs of participants, as well as embedding team teaching into technical instruction.
- All of the colleges designed programs of study to offer participants an incremental and step-wise progression along a career pathway through stackable and latticed credentials. Programs allowed participants to pursue, at a minimum, certifications and certificates, with some training programs extending to two- and four-year degrees. Across the colleges, industry partners and employers assisted in the development of the programs and credentials.

⁶⁸ Appendix B provides a table showing the core elements across rounds.

- Noncredit certificate programs were the first step along many of the career pathways and ranged in duration by industry and institution. The degree to which programs were latticed to allow participants to add or shift to a related field of study was limited.
- Colleges used competency-based assessments to steer participants toward programs best suited to their needs and abilities. All but four of the 17 colleges used prior learning assessments to award credit for demonstrated competencies achieved through work experience, noncredit professional development certificates, or academic credit to accelerate the participant's progression along a career pathway.
- Colleges used a variety of online and technology-enabled learning strategies to teach content to participants, enable them to learn at their own pace, support hands-on learning, and accelerate time to completion. Twelve colleges used online instruction, and half of these projects used real-time interaction with participants. Several colleges used multiple, hybrid strategies to support student learning, both for new students and incumbent workers. Fifteen of the 17 colleges used simulated learning, an opportunity afforded by the purchase or donation of equipment to support industry-approved curricula.
- For many colleges, developing transfer and articulation agreements was an outgrowth of curriculum development for the programs of study. The extent to which projects pursued transfer and articulation agreements ranged in scope from system-wide efforts to college-specific efforts. However, transfer and articulation agreements were not feasible for some programs that focused on certificate programs.

Evidence-Based Design of the TAACCCT Projects

A core element of the TAACCCT grant program was the use of evidence-based design in the development and delivery or replication of education and training programs.⁶⁹ Evidence-based designs, as defined in the Round 2 grant announcement, are those for which previous research has shown evidence that supports the effectiveness or efficacy of the practice, strategy, or program. Examples of projects incorporating evidence-based design included use of career pathways to foster employment, various instructional models to support acceleration and completion, and use of online learning to increase access and persistence for adult learners, especially those with families and are working. All colleges visited used contextualized learning interventions, and 12 colleges used various forms of modularized learning. Colleges also packaged multiple evidence-based components into their programs, such as team teaching, student supports, and industry alignment.

Five colleges replicated the I-BEST model, which combines basic skills and technical instruction in the classroom, (Bossier Parish, Meridian, Shoreline, Central Lakes, and St. Cloud). The I-BEST model is designed to address the basic skills needs of participants as they learn technical skills by using team teaching by an adult basic education instructors and career and technical faculty. Each college in the *IT Pathways* consortium, led by Bossier Parish, developed and implemented I-BEST pathways that featured a new, core foundational information technology curriculum that integrated basic skills instruction with

⁶⁹ For more details on the core elements across the rounds, please refer to the table in appendix B.

technical training to accelerate academic achievement and credential attainment. At Meridian, a consortium partner, instructors received training on I-BEST from Washington State and attended several professional development conferences focus on team teaching. Project staff at Meridian and the other Mississippi colleges in the consortium reported success with team teaching and other components of I-BEST, and the state planned to expand the intervention to all 15 community and technical colleges for use with career and technical education (for-credit) and workforce (noncredit) programs (using post-grant support from the Kellogg Foundation and other partners).

Five of the eight core strategies used by the *SUNY TEAM* consortium (led by Monroe) built upon promising evidence in training for advanced manufacturing. This included: 1) development of career pathways with clear entry and exit points from education and training programs to the workforce; 2) uniform core and specialty curricula based on the DOL competency model for advanced manufacturing (industry-defined skills and competencies for the industry) and incorporation of the National Association of Manufacturers-endorsed skills certification system; 3) validation of new and existing curricula with industry and industry associations; 4) fast-track developmental education curricula in support of advanced manufacturing programming; and 5) delivery of core, specialty, and developmental education courses via online and other alternative formats.

Contra Costa's *DBS* project used multiple evidence-based practices, aligning with industry requirements in the following areas: equipping participants with the basic/foundational skills necessary to be successful; curriculum components relevant for the industry; the duration and pace of the training program; program site/location; the equipment needed; and, the ability to stack certifications to allow for building a portfolio of credentials. Along with stacked credentials, the program implemented contextualized, applied mathematics, English, and digital literacy skills that were aligned with the requirements of the industry and progressed to transfer-level courses. The *DBS* cohort-based instructional model used linked courses, block scheduling, and instructional teams as the foundation for its local, sector-based, learning communities. The *DBS* project included expanded student support, such as use of counseling, embedded case management services, and services leveraged through other organizations. Staff thought the cohort model was critical to participants' success in the nine-week forklift, logistics, operations, and warehousing program, both in creating peer learning and support groups and providing additional supports for participants in need of intensive services.

Stacked and Latticed Credentials

All 17 colleges visited designed and implemented programs that allowed participants to pursue, at a minimum, certifications and certificates, with some grant-funded programs extending to two- and four-

year degrees. All colleges designed their programs to offer participants an incremental and step-wise progression along a career pathway with credential attainment. Across all colleges, industry partners and employers assisted in the development of the programs and credentials (discussed later under the Partnership section). Thirteen colleges also used PLA for adults entering the program to award credit that would accelerate the participant's route on a career pathway.

Noncredit certificate programs were the first step as a part of career pathways programs developed by the colleges (see box 3.1 for example). The programs ranged in duration by industry and institution. For example, at Contra Costa, the Bridge to Biotechnology program was designed as first step in the lab technician career pathway. The college created a new one-semester program for which participants completing the program received a certificate of achievement. As an entry-level credential, the certificate could be earned prior to completing the laboratory technician certificate, which already existed at Contra Costa prior to the grant. At Laney College, most participants in the first-year cohort who completed the noncredit certificate program, receiving the industrial machining and maintenance certificate, then continued in the program to earn a machining certificate and an associate's degree in the second year.

BOX 3.1

Taking the First Step with Noncredit Programs

The *Rx for Tennessee* grant team coordinated with the community colleges in their consortium and the National Healthcareer Association to determine how to better train students enrolled in noncredit programs so they can become employable in a shorter period of time. *Rx for Tennessee* redesigned courses as a team and made it easier to complete the noncredit courses in a timely manner. They latticed courses together, stacked credentials, and incorporated "exit points," allowing for nontraditional students or those who were recently unemployed to get enough training to get back into the workforce. Grant administrators observed that this approach encouraged participants to come back to receive additional training and improve their skills to move up in the workforce, better support their families, and continue working. Their skills were transferrable, allowing participants the opportunity to go to other parts of the country and know they have the skills needed to get a particular job.

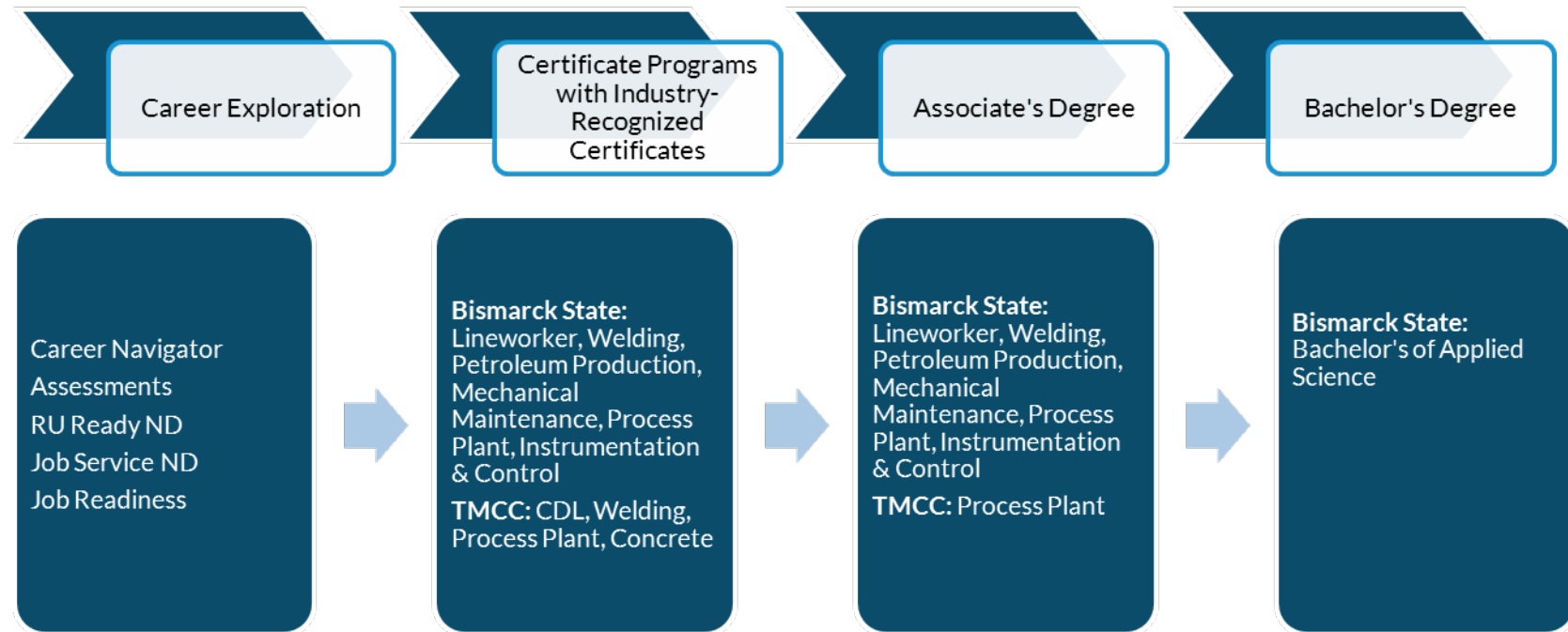
Source: TAACCCT Round 2 site visit interviews, 2016.

The *TREND* consortium, led by Bismarck State, designed the energy programs to help participants progress along a career ladder and articulate the pathway from a certificate to a two- or four-year program. A participant could obtain a certificate and associate of applied science degree in two years. The two-year technical programs then articulated to four-year programs. (See figure 3.1 that shows the progression of credentials a participant can earn.) Participants also received Occupational Safety and

Health Administration safety training in all certificate programs. According to Bismarck State administrators, participants were “more marketable because they have a degree and certification.”

FIGURE 3.1

Career Pathways for Bismarck State and Turtle Mountain Community College (TMCC) (TREND Consortium)



Source: Adapted from the TREND Consortium career pathways model.

The degree to which colleges created latticed credentials, which allow participants to add or shift to a related field, was limited. Roane State, part of *RX for Tennessee*, responded to industry need for health care workers to have diverse skills and created a lattice for broadening the skills of participants. For example, participants enrolled in phlebotomy, patient care, or electrocardiogram specialties also completed the clinical medical assistant certification, which expanded their qualifications and increased their marketability to employers. Some highly specialized technical fields were not amenable to a lattice structure because of the specific industry requirements for occupations. In addition, the Edmonds *PACE-IT* staff noted that more work was needed to identify the skill sets that would facilitate transferring an information technology participant from a certificate program in web development to multimedia and design, core software engineering courses, and database management.

Prior Learning Assessments (PLAs)

PLAs provided participants with the opportunity to receive credit for prior education or work experience toward completing a program of study. All but four of the 17 colleges used PLAs to award credit for demonstrated competencies achieved through work experience, noncredit professional development certificates, or academic credit and to accelerate progression along a career pathway. In three instances, the colleges helped to formalize an informal learning experience, such as expertise gained by military or incumbent workers (Shoreline, Bossier Parish, and Meridian). One consortium leader noted that alignment of curricula helped with making PLAs more consistently designed and implemented across the colleges.

Strengthening PLA policy and practice was a significant accomplishment for the Bossier Parish *IT Pathways* consortium. With technical assistance from the National College Transition Network and National Council for Workforce Education, Meridian fully implemented a preexisting PLA policy at Meridian. Participants paid for the cost of the exam and received college credit if they passed (rather than paying full tuition and the cost of the exam as in the past). At both Bossier Parish and Meridian, implementing the new PLA policy required obtaining buy-in across the college, especially from faculty, and led to improving the rigor and quality of the PLA exams and making them more relevant to employers, where possible.

Online and Technology-Enabled Learning

Colleges visited used a variety of online and technology-enabled learning strategies to teach content to participants, enable them to learn at their own pace, support hands-on learning, and accelerate time to completion. Twelve colleges used online instruction, and half of these projects incorporated real-time

online interaction between instructors and participants. Box 3.2 provides a more detailed example of a project that integrated online learning into its instructional design.

BOX 3.2

PACE-IT: Self-Paced, Faculty-Supported Learning

Self-paced, modularized e-learning is increasingly in demand by employers to train information technology professionals and obtain needed certifications. All *PACE-IT* programs of study at Edmonds Community College involved online webinars and class sessions, which enabled participants to gain skills at the time, place, and pace best suited to their needs and abilities. The use of e-learning also helped Edmonds maximize scalability of its certificate programs because they could enroll more participants by recording webinars and using less classroom space. Faculty prepared presentations to post online for participants that may have missed a class or to expand on a topic. Participants could ask questions in real time. If participants reached out to their instructors for extra support, faculty responded within 24 hours. Many participants also wanted direct interactions to help them master content. Faculty would hold chat sessions and share screens with participants so that they could jointly navigate the desktop. The weekly Navigator Hour, which connected participants to employers in the information technology industry, was also a real-time online interaction.

Source: TAACCCT Round 2 site visit interviews, 2016.

Several colleges used multiple, hybrid strategies to support student learning, both for new students and incumbent workers. NEIT's short-term occupational training (8 to 10 weeks) focused on welding and machining, accompanied by remedial math and job readiness workshops, along with blended classroom and hands-on, project-based instruction in the shop. For Bismarck State's *TREND* programs, colleges posted all curricula online, participants engaged in real-time online interactions with faculty using a chat platform during office hours, and all programs used simulations, although the intensity varied. Central Lake's *Mediated Telepresence* hybrid delivery model for incumbent worker training allowed participants to take classes from home or at their employer site. The model included meetings with instructors and classmates through mediated telepresence and online self-study.

Fifteen of the 17 colleges used simulated learning, an opportunity afforded by the purchase or donation of equipment to support industry-approved curricula. Colleges used simulations to build knowledge and skills in a setting similar to the workplace they would soon enter. Advanced manufacturing projects at Cayuga, NEIT, and Shoreline incorporated simulations into their computerized numerical control courses, where participants wrote programs for machine tools. The CDL programs implemented through the *TREND* consortium and Vincennes University used simulators as part of a three-pronged strategy that combined classroom, simulation, and behind-the-wheel driver training. Health care training at Roane State and Northeast State relied on simulations to teach routine

procedures for phlebotomy, electro-cardiogram, and certified clinical medical assistant programs. LPN and nursing programs used simulations, especially in “mock-code” exercises to mirror stressful clinical situations, such as respiratory and cardiac arrest. Information technology participants enrolled in Edmonds’ *PACE-IT* program worked in simulated environments to penetrate secure firewalls and network for the Ethical Hacker certificate program. At Turtle Mountain, use of simulators to supplement instruction also saved on cost of materials for welding programs. To scale simulation activities, Vincennes used a mock warehouse for training participants in supply chain logistics using a facility with the equipment and technology to mimic the workplace.

Transfer and Articulation Agreements

For many of the colleges visited, developing transfer and articulation agreements was logical component of the career pathways programs to ensure participants could advance beyond the initial steps. The colleges pursued transfer and articulation agreements, a required element of the Round 2 grants, that were part of statewide efforts to coordinate articulation across institutions while other colleges implemented articulation agreements as a part of a consortium. Other colleges did not focus on articulation as they already had agreements in place or they found that developing articulation agreements were not feasible for their grant.

The *SUNY TEAM*, an example of a statewide effort, made a significant investment to allow transfer of general education course credits across the SUNY system that could be sustained after the grant ended. Led by Monroe, a workgroup drawn from seven community colleges across New York State (Monroe, Gonzaga, Cayuga, Erie, Corning, Lafayette East, and Ulster) developed the requirements for the core curriculum for advanced manufacturing certificates. SUNY (a partner in the grant) and the New York State Department of Education approved the core curriculum. The credits could then be transferred to advanced degree programs across the SUNY system.

As part of the grant, the five college partners in the *TREND* consortium, including Bismarck State and Turtle Mountain, agreed to articulate the career pathways from two- to four-year programs. Transferring across colleges in North Dakota was already feasible as there were policies in place for general education requirements and a common course numbering system across the colleges and universities. However, the consortium needed articulation agreements specifically for the advanced manufacturing programs. Among the agreements developed as a part of the grant, Turtle Mountain’s process power plant associate’s degree was made transferrable to other institutions to earn a bachelor’s degree within the *TREND* consortium and in the state.

Another example of articulation agreements developed by colleges as a part of a consortium grant is the Bossier Parish-led consortium. Colleges in Louisiana revisited existing agreements and updated some of them to reflect the career pathways programs they developed, and there was one new articulation agreement developed for health information technology. For Central Lakes' grant, Central Lakes, St. Cloud, and Pine Tech set up credit transfer agreements, but no other transfer agreements were put in place. The advanced manufacturing programs could be articulated to an applied engineering bachelor's degree at Bemidji State.

For at least four colleges, including NOVA and Shoreline, transfer and articulation agreements predated the grant and were not a focus of grant-funded activities. Likewise, Roane State and Northeast State, part of Tennessee's community college system, had a transfer system already in place between colleges for noncredit courses. All associate programs offered general education courses that were transferable to other colleges and institutions.

For some colleges, they did not develop transfer and articulation agreements because four-year degree programs were not part of the career pathways program or they did not have needed time within the grant period. For colleges that focused on certificate-bearing programs only, such as Laney and Contra Costa, transfer and articulation policies were not established to transfer to degree programs at four-year institutions. The *PACE-IT* program at Edmonds resulted in one-year certificates and were not articulated to degree programs. Developing a transfer process would have required mapping the online courses to campus-based courses so that participants could continue the path to a two-year degree before moving on to a four-year university. The project leadership indicated that this was not feasible within the timeframe of the grant.

3.3. TAACCCT Participants

Guidelines for the Round 2 TAACCCT grants gave priority to workers who were TAA-eligible, along with broad flexibility to determine eligibility of adult learners for programs of study developed under the grant. This section describes the characteristics of the participants targeted for the grant-funded programs, the geographic reach of the outreach efforts, and the methods used to recruit and reach diverse participants. This section also addresses partners' role in recruiting participants and key student demographics, along with information about how participants learned about the programs.

These are the key findings from this section:

- Almost all colleges targeted unemployed and underemployed men and women, similar to Rounds 1 and 2 projects overall. Colleges coordinated with American Job Centers to help

identify these individuals or relied on other public programs such as Temporary Assistance for Needy Families or community-based organizations for referrals. A few projects targeted TAA-eligible and dislocated workers, or the long-term unemployed. Projects also targeted incumbent workers who were looking to increase their skill levels and marketability within a certain industry sector, such as energy or information technology.

- Some colleges found that their manufacturing or skilled trades programs largely attracted men and tried to do more to attract women by “sending a different message” in their marketing materials. Traditional health care fields, such as nursing or allied health, continued to attract significantly more women.
- All 17 colleges conducted recruitment and outreach efforts, and used many methods to draw participants to their programs. Successful marketing methods included branding the programs, maintaining an active online presence through their websites, using traditional print media, distributing brochures, posting billboards along the road, and airing radio and TV ads (particularly in rural areas). More direct methods used to recruit participants included holding open houses and job or career fairs, along with professional networking to introduce participants to employers and industry partners. “Word of mouth” recruitment, whether by staff, faculty, or the participants themselves also occurred. Participants were proactive in seeking opportunities for training.
- Colleges concentrated on recruiting participants from the local area, regardless of their grant type. This included adjoining counties that were within driving distance to their community college or were part of an area transportation network. The statewide consortia recruited participants across the entire state. Nationwide recruiting was limited to one project that featured online certificate programs.
- Colleges often gave veterans and their eligible spouses the highest priority over both TAA-eligible applicants and others.

Characteristics of Participants Targeted for TAACCCT Projects

Almost all colleges visited targeted unemployed and underemployed men and women. Projects coordinated with American Job Centers to help identify these individuals or relied on other public programs such as Temporary Assistance for Needy Families or community-based organizations for referrals. A few colleges targeted TAA-eligible and dislocated workers, or the long-term unemployed. Two colleges targeted incumbent workers who were looking to increase their skill levels and marketability within a certain industry sector, such as energy or information technology. Another college reached out to unemployed foster care youth. One college did not target a particular population but attracted non-traditional students, some of whom had attended college previously. Some colleges found that their manufacturing or skilled trades programs largely attracted men and tried to target women by “sending a different message” in their marketing materials. Traditional health care fields, such as nursing or allied health, continued to attract significantly more women.

One notable group colleges targeted was veterans. Eight colleges (Bismarck State, Bossier Parish, Cayuga, Meridian, Monroe, NEIT, Shoreline, and Vincennes) specifically targeted veterans for training,

compared to 87 percent of all Rounds 1 and 2 projects (figure 2.11). Bossier Parish placed an emphasis on veterans and those in the military, including their spouses, which comprised a significant part of the local population due to the presence of a local Air Force base. NEIT worked closely with several organizations to “bring in veterans” and had success working with the National Guard to attract their retirees. Through its veteran services coordinator, Bismarck State in North Dakota reached out to former servicemen and women, who were returning to the region and in need of jobs. Monroe developed a process and recorded webinars on how to recruit veterans across the 30-college consortium, as not all community colleges have veteran coordinator offices. Directors of two local grant projects noted that veterans bring strengths (such as self-discipline, mechanical aptitude, logistics experience) but also have barriers to training. Veterans may have employment and life challenges, and are also often in need of financial, health care, and childcare services. One project director noted that communication and recruitment strategies that appeal to the value and transferability of one’s service in the military and having a consistent point of contact were helpful.

Recruitment and Outreach Strategies and Methods

All colleges visited conducted recruitment and outreach efforts, and used many methods to attract participants to their programs. These methods include online tools such as websites and videos, advertising through traditional media such as newspaper articles and billboards, and events such as open houses and job fairs. Word-of-mouth also played a role in recruitment. The strategies the colleges used were similar to those used for other community college initiatives such as the DOL-funded Community-Based Job Training grants program (Eyster et al. 2013) but colleges often used more online tools such as LinkedIn.com and YouTube videos.

Extending the reach of the TAACCCT programs. All 17 colleges recruited participants from the local area, including adjoining counties that were within driving distance to their community college or were part of an area transportation network. Lead grant institutions that implemented a statewide consortium, such as Roane State in Tennessee or Bismarck State in North Dakota, recruited participants from the entire state, as did Central Lakes College in Minnesota and NEIT in Rhode Island, both single-institutions grantees. Through its online recruitment and LinkedIn postings, the *PACE-IT* program at Edmonds had a nationwide reach and attracted participants from California, Florida, and Washington, where the college was located.

Using multiple recruitment methods. Colleges used multiple forms of media to market their programs and reach potential participants. At least six colleges marketed their programs through their websites, describing their programs and potential career pathways. One statewide consortium posted its

brochure along with YouTube videos that gave participants a sense of what the program would involve. Another maintained a Facebook page. Two colleges had newspaper articles written about the training and career pathways available, while a success story about a graduate from another college was featured in the newspaper. Billboards along the road drew attention, as did semitrucks with “wraps” featuring information about the programs. Some colleges distributed brochures at community events or a shopping mall. Challenged by geography, radio and TV ads were used in rural areas to reach potential participants dispersed across the state or, in some cases, on reservations.

For two single-state consortia, outreach and recruitment efforts were part of a unified branding strategy across educational partners. Bismarck State and its state and tribal partners used common recruitment materials, such as brochures and website information, but the partners also created their own materials that reflected their region or tribal community. Roane State, the lead entity for *Rx Tennessee*, created a logo to brand the initiative across the state, and each college within the consortium used its existing dissemination network to market the overall grant project. Branding the project allowed for a common identity across a broad geographic service area but also underscored the commitment of the consortium partnership.

More direct methods of engaging participants included holding open houses and job fairs or career fairs (see box 3.3). Held by at least six colleges, these events gave participants the opportunity to learn about programs, meet the faculty, and tour the facilities and labs. Joined by employers, these events also helped prospective participants better understand the industry. Professional networking, such as inviting employers and industry professionals to meet informally with participants, was also a valuable recruitment tool. For example, using LinkedIn was a very successful means of attracting entry-level and incumbent workers for Edmond’s *PACE-IT* programs, as well as holding seminars at the college that were broadcast online.

Colleges built on or established relationships with American Job Centers and other organizations to receive direct referrals. Some also recruited on-site at these locations to reach unemployed and underemployed people. Other colleges received referrals from Temporary Assistance for Needy Families programs, Supplemental Nutrition Assistance Program offices, and military bases. Outreach to prospective participants was coordinated with centers and veterans’ organizations through referral strategies and with industry partners through job fairs. For example, the *SAMI* program at the NEIT received referrals from a variety of sources, including American Job Centers, community-based organizations, veterans’ organizations, and other public/private organizations. NEIT’s website provided background about the program, and brochures have been developed and distributed about *SAMI*.

BOX 3.3

A Pipeline to Good Jobs

Some colleges, such as those at Turtle Mountain and Roane State, reached out to current high school seniors, with an eye to creating a pipeline for the certificate and degree programs. Both Monroe and Cayuga, part of the *SUNY TEAM* consortium, reached out to high school students and those attending technical education programs operated by the Boards of Cooperative Educational Services. Recent high school graduates are often first generation students and the projects noted the importance of appealing to low- and middle-income parents and conveying to them the lower cost of a technical education at a two-year institution and the prospect of employment in high-demand jobs.

Source: TAACCCT Round 2 site visit interviews, 2016.

Many staff at colleges cited the value of “word of mouth” recruitment, whether by staff, faculty, or the participants themselves. Central Lakes staff noted that “word of mouth” recruitment was resource-intensive but effective. The lineworker and mechanical maintenance participants at Bismarck State reported that they recruited friends who “want in” to these trades as they see the “goal at the end of the tunnel.” Los Medanos staff noted that new participants heard about the programs from other graduates and from their relatives. At Turtle Mountain, the college leadership personally recruited participants as they are from the reservation and know many of the families and individuals.

How participants found grant-funded programs. Some participants stated that they had independently sought information about programs that would best suit their aspirations and needs. Many participants conducted Internet searches to find programs of interest, either in their local area or for distance learning; none reported obtaining information through social media. To a lesser extent, participants reported attending open houses and job fairs, as well as presentations and workshops to learn about the programs.

While some dislocated workers and unemployed adults heard about the programs through American Job Centers, others learned about them through social services programs, the unemployment insurance office, union representatives, or faith- and community-based organizations, underscoring the importance of establishing partnerships and casting a broad net for recruitment efforts. Participants also learned about the programs through print and broadcast media, including newspaper articles, public service announcements, and TV commercials, along with promotional materials, such as flyers and brochures.

Participants also indicated that they heard about the programs mostly through word of mouth within their social network. Family and friends, coworkers and employers, graduates, and faculty passed

along program information. Some participants had family members that were already working in the trade or occupation, such as machining. Other participants were already enrolled in a program and said that faculty gave them advice about signing up.

3.4. Implementation of TAACCCT Projects

The TAACCCT grant program provided funding to community colleges to drive innovation and development in education and training strategies that would address specific industry needs and lead to improved learning, completion, and other outcomes for American workers in high-wage, high-skill occupations. The guidelines gave colleges flexibility to implement a range of capacity-building activities and education and training programs. Colleges implemented their Round 2 projects over a 3.5-year period, with six months for evaluation. This section describes how the 17 colleges visited implemented their projects and capacity-building efforts, focused on staffing, improvements to equipment and infrastructure, curriculum development, needs assessment, and student support services.

These are key findings from this section:

- For all local projects, grant director or a local project director oversaw and managed the grant activities and provided oversight of the grant activities. Some took on this responsibility exclusively, while for others it was an additional responsibility. A combination of tenured college faculty and adjunct instructors implemented various parts of the projects. Faculty and instructors were deeply involved in curriculum development.
- Each college had one or more staff who provided direct assistance to participants with enrollment and preparation, accessing financial, personal or academic supports, and navigating job searches and hiring. Staff in these positions went by many names—case manager, career navigator, counselor, success coach—but performed similar functions. The career navigator position, in some cases, was integrated into college operations and sustained, was absorbed into existing positions, or would remain active through a Round 4 grant.
- Eight colleges made a significant investment in advanced equipment to support industry-specific instruction and hands-on learning, purchasing and upgrading classroom equipment and technologies for the courses developed. New equipment enhanced the development of curricula which enhanced instruction and skill development and training, including hands-on instruction.
- All but one college made significant investments in improving and developing curricula for skills-based credentials and specific career pathways. The colleges refined and developed new curricula across multiple sectors, including advanced manufacturing, energy, health care, information technology, and logistics. Across industry sectors, employers helped to identify and map the necessary skills and competencies for programs.
- Colleges identified educational readiness or service needs through various standardized assessments when a participant enrolled in a program. Many colleges also developed an individual service strategy or employment development plan for participants, based on the rigor and requirements of the program of study.

- Colleges provided a range of academic and nonacademic support services to assist with student persistence and completion—including supports for financial stability, persistence, and academic success. In 15 colleges, career navigators played an essential role in helping participants succeed in their program, working across these areas to support participants. Personalized supports and services addressed barriers to education and training and encouraged program success.
- Colleges used various models to provide support, including intensive case management, intrusive advising, and one-on-one services, including career planning, referrals, and job placement support. While some approaches involved a high degree of face-to-face interaction between participants and staff, other approaches were less intensive. Some colleges offering supportive services involved system-level partnerships.

Staffing Local TAACCCT Projects

For all local projects, grant director or a local project director oversaw and managed the grant activities. Some took on this responsibility exclusively, while for others it was an additional responsibility. Grant directors for multisite consortia such as NOVA, Bismarck State, and Roane State were responsible for grant coordination and oversight across multiple colleges; they were assisted by administrative staff who supported grant coordinating efforts, such as fiscal management and data tracking. Grant directors also had a lead role in outreach and collaboration with business and industry stakeholders.

Each college had one or more staff who provided direct assistance to participants with enrollment and preparation, accessing financial, personal or academic supports, and navigating job searches and hiring. Staff in these positions went by many names—case manager, career navigator, counselor, success coach—but performed similar functions. (See box 3.4 for the variety of titles used across colleges.)

BOX 3.4

Different Titles, Common Responsibilities

The titles of college staff providing support to participants varied greatly, including:

- Case Manager: NEIT
- Career Navigator: Turtle Mountain, Shoreline, Bossier Parish, Meridian CC, Shoreline, Bismarck State
- Success or Completion Coach: Roane State, Northeast State
- Success Counselor: NOVA
- Education and Employment Adviser: Central Lakes, St. Cloud
- Academic Coach and Navigator: Edmonds CC
- Counselor: Cayuga CC
- Coordinator: Laney College
- External Support: Contra Costa

Source: TAACCCT Round 2 site visit interviews, 2016.

Faculty and staff were deeply involved in grant activities. Dedicated instructional faculty at all colleges supported the programs of study. Depending on the technical specialization, some colleges hired shop managers (Shoreline) or lab managers (Edmonds) to provide instructional and hands-on support to participants. Faculty and instructors not only provided instruction, but served as advisers and mentors to participants. Adding value to the projects, they facilitated career navigation by tapping their professional networks to connect participants to employers. At some colleges, staff performed specialized functions, such as outreach and marketing (NOVA), curriculum development (Roane State and Edmonds), customized training (Central Lakes), and job development with employers (Bossier Parish, Meridian, and Cayuga).

Existing staff and new hires. Colleges balanced the need to fully staff the program with the longer-term need to sustain instructional capacity and student supports. In most cases, grant and project directors were existing college staff. Case managers that worked directly with participants were often new hires, as were specialized staff.

Many colleges used existing full-time or adjunct faculty to teach courses (Monroe, Cayuga, and Edmonds). Using grant funds, some hired new instructors (NEIT, Bismarck State, Turtle Mountain, Bossier Parish, Meridian, and Laney) or instructional assistants (Shoreline and Laney) to teach newly developed or specialized courses, such as information technology or machining. Bossier Parish hired instructors for team teaching needed to implement the I-BEST model. Some colleges also used institutional resources to fund new faculty positions and ensure sustainability (Meridian and Bismarck State).

Sustainability of staffing. The degree to which the staffing positions were sustainable varied across the grants. Leadership saw faculty and instructional staff positions that were supported independently of grant funds as sustainable. However, positions supported by the grant generally would not be sustained. Staff with grants management or coordination responsibilities would either assume their previous responsibilities or be transferred to another position within the college. Some specialized positions were limited to the grant and would not continue. The exception was the career navigator position, which in some cases was integrated into college operations (Shoreline, Roane State, and Northeast State), planned for sustainment (Bossier Parish and Meridian), absorbed into existing positions (Edmonds), or would remain active through a Round 4 grant (Bismarck State and Turtle Mountain).

Upgrading Equipment, Facilities, and Infrastructure

Eight colleges made a significant investment in advanced equipment to support industry-specific instruction and hands-on learning. Many colleges purchased and upgraded classroom equipment and technologies for the courses developed under the grant. Some purchased equipment that would enhance or implement the community colleges' information technology infrastructure used in support of education and training and related activities. The purchase or donation of equipment enhanced the development of curricula, which in turn, enhanced instruction and skill development and training. Colleges adapted curricula to incorporate new tools and equipment that would keep their programming current to train participants in the high-demand sectors.

"The equipment [purchased through the grant] enables the curriculum to be updated and upgraded and students trained according to industry standards."

- TAACCCT instructor

Improving the community colleges' facilities and infrastructure. Eight colleges made large-scale improvements to the community colleges' facilities or infrastructure to support advanced instruction in information technology, machining, or manufacturing. These improvements ranged from upgrading existing facilities with new training equipment or retrofitting existing spaces for new purposes. These improvements help support participant access to courses, use of work-based learning to enhance curriculum, and expansion of education and training programs.

Some colleges focused on skilled trades or precision manufacturing upgraded their workshops and labs with expensive, specialized equipment to support hands-on instruction to bring work-based learning to the classroom. NEIT purchased equipment for the welding shop, setting up 10 state-of-the-art welding stations at a cost of about \$10,000 per station. Establishment of machining and welding shops and purchase of new equipment was critical to being able to offer the 8-week welding and 10-week machinist training programs. Similarly, Turtle Mountain's welding program was outfitted with new compressors and safety equipment, along with new equipment that allowed participants to learn more advanced technical processes. The college increased the number of welding workstations so each participant had their own space to work in, similar to a shop floor. Purchase of a simulator helped participants to practice their skills and saved on material costs. At Laney, grant funding was used to

outfit the machining shop with new equipment (e.g., lathes, Bridgeport mills, high-speed computer numerical control (CNC), super mini mill, CNC lathe, optical comparator), as well as steel for machining exercises. Participants at one of the colleges stated that the best part of the program was “the hands-on experience with equipment you’ll see in industry.” Three colleges that offered CDL training (Bismarck State, Turtle Mountain, and Vincennes) purchased semitractor trailers trucks (worth about \$120,000 each) and simulators to facilitate hands-on learning and driving practice for energy and logistics sectors.

Grant funding also supported outfitting of state-of-the-art labs as a part of existing spaces that mirrored industry facilities to enhance work-based learning. Vincennes created a mock warehouse for its LTEC initiative to simulate actual operations. Central Lakes created a state-of-the-art *Advanced Manufacturing Institute* for which industry partners and vendors donated equipment. Machine shops at the colleges were designed and upgraded to mirror facilities in the industry in terms of lighting, space, and equipment. As one grant director noted, “Funds for equipment are hard to come by.”

Colleges leading information technology-focused projects invested in technology for the programs to help participants access coursework. For example, Edmonds purchased laptops for remote participants to use when they were taking online courses. Bossier Parish and Meridian, both part of the *IT Pathways* consortium, purchased laptops and software for participants to use while they were enrolled. Colleges leading health care-focused projects that were implemented by the *Rx Tennessee* consortium invested heavily in state-of-the-art technology and specialized equipment, practitioner tools, and supplies for nursing, phlebotomy, and surgical technology programs (e.g., pediatric and mother-baby mannequin simulators; a simulated electronic medical record system; phlebotomy arms; electrocardiogram machines; and workstation on wheels).

Upgrading equipment not only enhanced the quality of instruction, but supported the expansion of programs of study. At Shoreline, grant funding was used to purchase major equipment items for the machining shop, including: milling CNC machine (costing more than \$100,000), three manual lathes, and an advanced quality assurance measuring equipment. These investments supported expansion of instruction to include quality assurance and machine maintenance courses, as well as increasing class size. Investments made in the process plant technology at Bismarck State facilitated the transfer of participants from Turtle Mountain’s two-year program to the four-year program at Bismarck State.

Partners contributing to upgrading facilities. Employer partners made significant contributions to upgrade facilities and equipment by donating or lending equipment. Project stakeholders indicated that this was an important demonstration of industry’s commitment to the local grant projects, whether through donations of brand-new or gently used equipment, and loaned equipment. Partner

contributions crossed sectors, spanning information technology, advanced manufacturing, energy, and logistics.

Employer partners working with Bossier Parish contributed to facility and infrastructure development for information technology programs. Central Lakes also received donations of equipment and metal and manufacturing supplies from multiple employer partners. For Monroe's optics program, local employers donated equipment for on-site participant training or sold the equipment at a reduced rate. Equipment included a table with lasers, lens, and cameras (worth about \$250,000) and measurement equipment. Other employers provided new simulators for use in the precision machining lab at Monroe's Applied Technologies Center. Industry partners and vendors lent equipment to the *Advanced Manufacturing Institute* at Cayuga. They helped to outfit the lab with high-performance machine tools, including a robot, injector molding, and spectrometer, as part of the loaner program; the machines will be switched out each year. Local and regional utilities, which partnered with colleges in the *TREND* consortium, provided a cash match (about \$1,200) to buy utility poles for the lineworker program. Through a partnership with a regional consortium of water utility companies, lab equipment was donated to Laney and other community college partners. One hurdle was that the equipment had to be deemed as worthless to the donating entity or no longer working to legally transfer ownership to the colleges. For Contra Costa's forklift, logistics, operations, and warehousing program, employers helped to select forklifts; one employer donated a large shipping container to use with the forklifts. More information on the role of employers in providing equipment can be found in the Partnerships section.

Developing and Enhancing Curricula

The colleges visited made significant investments in improving and developing curricula for skills-based credentials and specific career pathways. All but one college (NOVA) used grant funds for curriculum development. These colleges provided refined existing curricula or instructional methods to support career pathways programs. With the input of employers, others developed brand-new curricula based on industry needs and economic conditions. This section describes the range of curriculum development activities in which the colleges engaged.

Adding to and enhancing curricula for career pathways. Colleges developed new components of existing programs such as soft skills training or lab courses. While the core information technology curriculum was not new at Bossier Parish, the college added soft skills and professional development courses. All pathways for the two *IT Pathway* consortium projects included a work ethics class which ends with the completion of a Skills USA certification exam. Contra Costa introduced a lab course to the preexisting curriculum for the *Bridge to Biotechnology* program, thus filling a gap in the career pathway.

Shoreline's C2C project provided funding for instructors to revise and update the first-year coursework for principles of precision machining and create new curricula for quality assurance and machine maintenance, two new areas that were in high-demand by employers. Addition of these new courses was also geared towards encouraging first-year students to continue to a second year of machinist coursework, which would result in an associate's degree.

"For our program, companies from around the area come together twice a year, and instructors talk to them and see if what we're doing goes along with what they need."

- TAACCCT project coordinator

The *Rx for Tennessee* consortium focused on health care education and training for both credit and noncredit tracks, so that participants could obtain a certificate or build on prior credentials to advance in their field. Each college in the consortium focused on developing programs that augmented their existing training and met employer-identified needs or opportunities in the local economy. At Roane State, new curricula included allied health, electrocardiogram machinery, intravenous therapy, and phlebotomy. At Northeast State, new curricula included the licensed practical nurse to registered nurse (LPN-to-RN) program.

Two statewide consortia focused on building an infrastructure for career pathways and credentialing throughout the state and community college system, as well as articulation across the consortium. Bismarck State and its member colleges developed new curricula for multiple trades, including commercial vehicle operations, building trades, welding, and process power plant, all in high demand by the energy and construction sector. Instructors for these programs were all involved in developing or refining the curricula, with industry input. The staff designed the building trades curriculum to articulate with colleges across the consortium, including Turtle Mountain and other tribal colleges, and with the state colleges so that participants would receive a *National Center for Construction Education and Research* credential. The *SUNY TEAM* consortium, led by Monroe, developed a core curriculum for advanced manufacturing certificates that was transferrable across the SUNY system. The core curriculum includes seven courses: technical math, print or schematic reading, machine theory, two labs (manual and CNC), and computer practical literacy. Seamless transfer allows participants to move within the SUNY system across the state. Colleges within the consortium led curriculum development for certificate programs that were tailored to a specific region/niche in each economic

region across New York, such as optics in Rochester, nanotechnology in Schenectady, and plastics in Cayuga County. The 33-credit certificate program developed by *SUNY TEAM* resulted in an industry-recognized credential.

Aligning curriculum development with employer engagement. Employers' role in curriculum development was closely aligned with the colleges employer engagement strategy (see box 3.5 for an example). Employers assisted in multiple ways such as providing feedback to guide curriculum selection, identifying and mapping the necessary skills and competencies for programs, and serving on advisory boards.

BOX 3.5

Curriculum that Keeps Pace with Changing Industry Standards

Given the fast pace of development and change in information technology, the curriculum for the *PACE-IT* project had to be responsive and adaptable. For its new self-paced, competency-based, online certificate programs, Edmonds developed new curricula in Technology Integration and Support, Web Development, Ethical Hacker, and Network Management. Modularized and mapped to core information technology competencies, the learning modules for each curriculum could be updated quickly and remain current with industry standards and certifications. This adaptive feature enabled instructors to tailor the content, provided participants with up-to-date training, and assured employers that training was provided in on-demand skills and competencies for a rapidly-changing workplace. Subject matter experts and participants who had worked or were working in the information technology field provided insight to changes in the industry, resulting in adjustments to the *PACE-IT* curriculum.

Source: TAACCCT Round 2 site visit interviews, 2016.

Based on feedback from employers, Vincennes' *LTEC* initiative enhanced current class instruction for the CDL program and developed a tailored class to address workforce supervision and management, known as Team Lead Essentials. With the program design flexibility afforded by the grant, the CDL coordinator restructured and redesigned the class to ensure greater standardization, as well as maximization of classroom and driving, warehouse, and testing time. In addition, the college reduced the course length from eight to six weeks to compress the pathway from training to employment. Incoming cohorts were scheduled in a manner that allowed instructors to alternate between the classroom and warehouse/forklift instruction. The Team Lead Essentials program was developed in direct response to employers' request. Using a tailored, management-focused, boot camp approach, the employer selects individuals for the program. Employers wanted to recognize workers' management and leadership skills, as well as teach lineworkers and forklift drivers to manage conflict, foster team building, and stimulate

positive peer relations. Completion of the Team Lead Essentials class resulted in taking on a supervisory role with other participants.

As noted by one of the grant directors, “One of the keys to success was the ability to modify curriculum content to address employers' needs.” This was especially true for noncredit certificate programs where the colleges had greater flexibility with instructional design. To this end, employers assisted with curriculum design and development for many programs, such as the Plastics Technology certificate program at Cayuga and for the *AME Alliance's* incumbent worker training conducted by mediated telepresence at Central Lakes. Employers served on skills panels to review curriculum, as for NOVA's quality assurance planning curriculum and Shoreline's machinist program targeting the aeronautics industry.

Local project staff structured employer input into curriculum development through formal and informal mechanisms. Across the colleges, employers actively served on industry-specific advisory boards, which historically have played a key role in curriculum development. Reflecting the fluidity of the information technology sector, Bossier Parish had an informal process in place that allowed employers to inform incremental changes and updates to curricula on an as-needed basis, such as bringing in new software languages. Meridian, its partner in the *GCIT* consortium, met with employers twice a year to discuss their training and human resource needs. Managers then developed internal “workforce enhancement training plans” that were submitted to the college's board.

Sustaining curricula developed through the grant. All project directors noted that use of the curriculum developed using grant funds would be sustained beyond the grant period. Faculty and staff reported that new courses and certificate programs would become regular course offerings and programs of study at their colleges. New curricula were integrated into the community college offerings at both single institutions and consortia. For example, seven new programs and curricula for advanced manufacturing were developed by the *SUNY TEAM*, along with a core curriculum for general education that was transferable across SUNY community colleges (Monroe and Cayuga). Other sustainable curricula included the distance learning information technology programs developed by *PACE-IT* (Edmonds), *LTEC* (Vincennes), and allied health curricula for the Surgical Technology and Phlebotomy programs through *Rx Tennessee* (Roane State). Curricula developed through two projects will be sustained through Round 4 grants, including the machining and welding programs at *SAMI* (NEIT) and the energy and construction programs developed through the *TREND* consortium (Bismarck State and Turtle Mountain).

Assessing Educational Readiness and Service Needs for Participants

One of the first steps staff took when a participant enrolled was to identify educational readiness or service needs through various standardized assessments. These assessments differed by project. A common assessment used by five projects was ACCUPLACER®, an integrated system of computer-adaptive assessments designed to evaluate participants' skills in reading, writing, and mathematics. Central Lakes also required prospective participants to take the ACCUPLACER®, which facilitated identification of needs for adult basic education and tutoring.

Four colleges used COMPASS, an untimed, computerized test that helps colleges evaluate participants' skills and place them into appropriate courses. Northeast State used this for the *LPN-to-RN* program. As part of the *TREND* consortium agreement, Bismarck State's member colleges, including Turtle Mountain, used the COMPASS test to determine readiness and facilitate placement. At Turtle Mountain, the career navigator then reviewed results with the participants. the navigator also conducted assessments for math and writing to determine additional needs and supports. Bossier Parish also used the COMPASS test, although some colleges in the consortium started out using the TABE as a screen on the front end. Bossier Parish also used interest inventories for recent high school graduates. For adults who were returning to school, the National College Transition Network toolkit was used to identify college and career readiness, including personal, career, academic, and college knowledge. Following the assessment, a participant would meet with a career navigator.

Adapting the assessment process to meet participant needs. Other colleges used assessments that were suited to the target population, learning mode, and industry sector. For the *PACE-IT* program, which involved remote, self-paced learning, Edmonds used The SmarterMeasure, a web-based assessment which assesses a learner's readiness for succeeding in an online and/or technology-rich learning program based on noncognitive indicators of success. Working with a diverse population, Shoreline required participants to take a CASAS test to determine if their language skills were sufficient for entry into the program. The college did not require a minimum math or reading score, although basic English language skills were required. The CASAS test measures basic academic skills, critical thinking, and problem solving. Meridian required a formal assessment for program entry using the TABE. At Northeast State, prospective participants completed Career Scope, a standardized and timed interest and aptitude assessment for education and career guidance.

Developing a student-centered service strategy. Many colleges also developed an individual service strategy or employment development plan for participants, based on the rigor and requirements of the training program (see box 3.6 for an example). Colleges had formal and informal processes that involved

case managers and instructional staff. At Monroe, faculty advisers created a plan with the participant. The *SUNY TEAM* counselor at Cayuga developed plans for participants served through the American Job Center. For other participants, the counselor worked with them to develop an integrated course plan that focused on workplace readiness and soft skills. The instructors worked closely with participants on their portfolios that would be presented to potential employers. At Roane State, decisions about a participant's career path and appropriate training program determined the details of an individual plan. At Shoreline, the navigator met with the participant to talk about funding sources and transferable skills, and kept informal notes about participants. At Bossier Parish, although an individualized service strategy plan was not created for each participant, staff and I-BEST faculty worked with participants to develop a service plan. For participants entering the *LPN-to-RN* program at Northeast State, the completion coach worked closely with them to obtain extensive information which included employment history, veteran status, barriers, long-term and short-term employment goals, disclosure information, I-9 (immigration work) status, having an active LPN license, completed prerequisite courses, and readiness to take an entrance exam for the nursing program. Once accepted into the program, the completion coach held a nursing orientation and prepared an individual plan.

BOX 3.6

Assessing Readiness for Advanced Manufacturing at the Shipbuilding/Marine and Advanced Manufacturing Institute

Prospective participants at NEIT went through a several-day assessment process aimed at determining whether the individual had the aptitude, interest, and motivation to complete *SAMI* and enter a career in advanced manufacturing. Incoming participants attended a two-hour group orientation held weekly to provide basic information about careers in advanced manufacturing and an overview of *SAMI* and its programs. Those that were interested in moving forward returned two days later to take the ACCUPLACER®, which tested reading comprehension and mathematics skills.

Prospective participants then attended two days of skills assessment, spending six hours in the welding shop and another six hours in the machine shop, during which they watched demonstrations and conducted a series of work tasks aimed at determining each applicant's aptitude and desire to participate in *SAMI*. Instructors rated everyone's proficiency on a series of shop work tasks and work readiness.

Following this two-day skills assessment, participants met with a case manager to go over the instructor's assessment and recommendation to make an enrollment determination. Once accepted to *SAMI*, participants signed a participant agreement form and worked with their case manager to develop an employment action plan, which set forth employment goals, actions to achieve the goals, and a timeline for achieving the goals.

Source: TAACCCT Round 2 Site Visit Interviews, 2016.

Three projects had similar two-step processes in place that involved both a counselor and an instructor. The *SUNY TEAM* counselor at Cayuga developed plans for participants served through the American Job Center. For other participants, the counselor worked with them to develop an integrated course plan that focused on workplace readiness and soft skills. The instructors worked closely with participants on their portfolio, which would be presented to potential employers. At Central Lakes, all participants, in both the mediated telepresence and traditional academic programs, developed individual learning plans with their education and employment advisers to help them reach their education and career goals. The adviser reached out every week via email with tips and worked with instructors to monitor participant progress. Bismarck State used a hybrid online and in-person process to develop a plan. Prospective participants filled out a form on the project website which was then sent to the career navigator. The career navigator would call, email or visit the potential participant and send the form to the instructor. Once the participant was registered, the career navigator walked the participant through a schedule and course plan.

Providing Supports and Services to Participants

The colleges visited provided participants with access to a range of academic and nonacademic supports and services to assist with student retention and completion, including supports for financial stability, retention and academic success, personal and family needs, and for referrals to other public support. While grant funds could not be used to directly pay for nonacademic services such as child care or transportation, they could be used to help participants access these support services through partners. To help ensure access and use of student supports, career navigators and other staff played an essential role with 15 colleges in helping participants succeed in their program, working across these areas to support participants. This section describes the range of support services provided to participants and how various college staff, especially career navigators, played a key role in implementing these services.

Expanding capacity to support participants through career navigators. Grant funds supported colleges' efforts to expand and improve their capacity to deliver student services. All but two colleges had staff members on board that provided supportive services to participants. The exceptions were Monroe, which had advisers and a program coordinator, and Vincennes, which did not provide direct supportive services but referred participants to the American Job Center. Staff that worked directly with participants went by many names—case manager, career navigator, counselor, to name a few—but shared a common purpose in supporting participants along their career pathway from enrollment to employment. Across the colleges, interviewees observed that participants needed these services

because they have complex lives and different barriers to education and training that necessitate personalized supports to foster program success.

“My role is to make sure students are taken care of, getting employed, and not lacking anything. I am the front line for them...the career navigator is the glue that makes the whole career pathway work.”

- TAACCCT career navigator

Direct on-site support, with intensive services provided or brokered from the point of recruitment through program completion, was a feature of local projects in all settings. Staff supported participants enrolled in both certificate- and credit-bearing programs. Projects took different approaches in providing supports (see box 3.7 for a more detailed example). Described below, seven projects provided intensive supports through case managers (NEIT), career navigators (Shoreline, Turtle Mountain, Bossier Parish, and Meridian), and success or completion coaches (Roane State and Northeast State).

NEIT assigned case managers to each participant at the time of enrollment in the programs. The funds covered the cost of 3.5 fulltime equivalent case managers. They provided one-on-one counseling, referred individuals to support services, and intervened when needed to keep participants from dropping out of the program. Along with the instructors, they evaluated participant progress every two weeks. Additionally, the case managers conducted the two-hour group intake orientation. During the enrollment/intake process, they administered the CASAS assessment and held one-on-one meetings to assess what program would best suit the participant. Once enrolled, the case managers made sure all paperwork was completed and worked with each participant to complete an employment action plan. During the program, case managers met with participants to discuss progress and service needs, and as appropriate, referred them to supportive services (such as Supplemental Nutrition Assistance Program, housing assistance, childcare, veterans' services, transportation assistance, and workforce services offered by the American Job Center). Case managers also ran job readiness workshops (participants in the machinist program attended six hours of job readiness workshops per week). Once participants completed training, the case managers worked with instructors to assist participants in obtaining and applying for jobs. Project directors credited case managers with helping to keep attrition low during training, and contributing to what they considered a high job placement rate at the end of training (above 90 percent).

BOX 3.7

Career Navigator Role at a Tribal College

At Turtle Mountain, tribal culture influenced the supports provided to participants, and the college sought to create an extended-family environment on campus. All members of the staff and faculty played a part. Within the *TREND* programs, the career navigator's role reflected the tribal college's emphasis on educating the "whole person" and the Ojibwe ethic of helping each other. The career navigator, and others, provided multiple supports to participants. He/she worked one-on-one with participants to help them navigate the training and college experience from financial aid to scholarships and registration. The career navigator also asked participants about their support system at home and the need to balance family obligations with a participant's educational plan. Then, the career navigator made efforts to support retention or reduce barriers by finding resources to address child care needs, health issues, housing needs, any learning disabilities, financial literacy, or medical and/or emergency assistance. Staff saw this assistance as a way to ensure that no one "fell through the cracks."

Staff took daily attendance, which they shared with the career navigator who made immediate contact with absent participants to see if they needed assistance. Texting and calling participants, the career navigator maintained connections. The career navigator also connected with the instructors, who advocated on participants' behalf. The career navigator taught job readiness, assisted participants with drafting a cover letter or preparing for job interviews, helped with job searches, posted job descriptions in the classroom and on Facebook, and let instructors know about new job openings. The career navigator followed the participant for three months post-training and then checked in again at six and nine months.

Source: TAACCCT Round 2 site visit interviews, 2016.

Orienting participants to training and career pathways. Navigators helped orient first-generation and adult learners to the college environment. At Shoreline, the career navigators helped with an array of orientation activities: recruitment and assessment of new participants to the program; completion of admissions and financial aid paperwork (as well as ensuring that all sources of financial aid were maintained during the participant's enrollment); scheduling of classes; monitoring and ongoing case management; and access to support services. As one college administrator observed, the career navigator engaged in "match making" between participants and employers, including: arranging for work/study and internships; providing job readiness training; reviewing résumés; and assisting with job development and placement. College administrators and staff at Shoreline credited the navigators with bringing more participants to the program, reducing attrition during the training period, and high job placement rates at the end of training.

Implementing varied case management approaches. A variation of the intensive case management approach was an intrusive advising model that provided intensive supports, with a low student to adviser ratio (1 to 20), used by the colleges in the *AME Alliance*. At Central Lakes, education and employment advisers met with participants on a regular basis (or were even in the classroom) and

connected them with child care, transportation, tutoring, and other services. They offered a full spectrum of individualized supportive services, involving a bit of problem solving and hand holding. More than just referrals, the education and employment advisers took an “active role,” as they coordinated financial aid resources and helped with job readiness and placement through LinkedIn clinics, résumé clinics, and mock interviews (some with employers). College leaders and administrators at Central Lakes observed that the personal connection participants developed with their advisers helped improve retention and completion. Using a similar model, the *AME Alliance* advisers at St. Cloud met with participants on a regular basis (or are even in the classroom) and connected participants with child care, transportation, and tutoring. When classes started, the adviser helped them with courses and wraparound services, and sent weekly emails with success tips and course reminders.

For the *GCIT* program, career navigators at Bossier Parish provided case management-type, one-on-one services, including career planning, referrals, and job placement support. Supportive services lasted throughout the participants’ enrollment period and sometimes beyond. Grant funds were used to create a student services toolkit to help direct participants to community resources for childcare subsidies, Supplemental Nutrition Assistance Program, and other public supports. At Meridian, the career navigator and other staff also provided a comprehensive array of supports. Here, too, the navigator had a reference guide to provide referrals for anything that the workforce development division at the college could not provide. Playing a key role in student retention, the navigator and other staff worked closely with participants to ensure they stayed on track and helped them identify barriers to participation (e.g., needing a new tire or a gas card). Stakeholders reported that some participants still checked in with the navigator, even though their program had ended. Organizational relationships developed among the college, housing authority, human services, and the public workforce system were deepened and expected to continue.

At Roane State, the student success coach handled academic and nonacademic supports for participants enrolled in for-credit programs. This was particularly important for nursing participants in the *RX TN* program. At Northeast State, the completion coach recruited participants for credit and noncredit programs and hosted information sessions once a month. The completion coach helped with the application process, and once participants were enrolled, provided tutoring, one-on-one advising, and case management supports to access on-campus or community resources through the American Job Center. One college administrator referred to the completion coach’s role as providing “high-touch advisement.” The completion coach noted, “I am there for students, a shoulder to cry on, to vent about stress. The one-on-one academic advising plans start early in the game.”

Edmonds project staff took a dual approach to providing supports to *PACE-IT* participants. While there was not a formal case management component, the college had two academic coaches and a navigator that worked with participants enrolled in the self-paced, distance learning certificate programs. The academic coaches supported the participants from referral to enrollment, providing “assistance to students when certain life events occurred,” and due to the self-paced nature of the program, making sure that the participants remained on track to complete the course. The navigator role transitioned over time to assist participants with finding jobs, “meeting up” in a highly-networked information technology community, and learning about internship opportunities. Supporting the navigator, the faculty also provided job and internship assistance to participants. An instructor stated that having an academic coach and navigator worked efficiently, especially by having the steps in the process broken out so that different persons can focus on certain aspects of a participant’s education.

At Cayuga, the *SUNY TEAM* counselor served as a career coach and worked closely with all participants, particularly with TAA-eligible workers and laid-off workers that were referred by the American Job Center co-located on the college campus. The counselor worked intensively with participants from the point of enrollment through completion, focusing on: assessment; identifying prior learning experiences; supporting retention; assisting participants with job searches and preparing industry-appropriate résumés; using networking tools and connecting participants to opportunities; and job placement and follow-up career navigation. Working with local employers, the counselor also helped incumbent workers access training.

While some approaches involved a high-degree of face-to-face interaction between participants and staff, other approaches were less intensive. Bismarck State assigned each participant to a career navigator who served as his/her point of contact for the program and offered academic and nonacademic assistance. Focused on retention and academic attainment, the navigator could also provide intensive support for any challenge and help with obtaining internships. Upon enrollment, the career navigator met with each participant and then reached out three to four times per semester, to make sure that participants met registration deadlines, to check on academic progress, or to send graduation reminders. The frequency and mode of contact varied, depending on participants’ grades. With struggling participants, the career navigator reached out in person or by phone; with participants that were doing well in their programs, contact was mostly through email. Faculty served as participants’ primary adviser, and they developed a close bond with the participants. The career navigator served as an intermediary, linking faculty and participants when necessary.

A different model of supportive service delivery for participants involved system-level partnerships. Contra Costa partnered with various local boards, American Job Centers, community-

based organizations, and employers as part of an integrated service delivery and employer engagement strategy. These partnerships facilitated delivery of supportive services to participants. Meetings occurred bimonthly with the local boards, which coenrolled participants in Workforce Innovation and Opportunity Act programs to leverage funding and provide job placement and support services for participants. Local community-based organizations provided an integral service to the college by providing wraparound support services, including financial planning services, credit counseling, career coaching, and job placement.

Ensuring financial stability. Grant funding could not be used to pay for tuition but all but a few colleges helped participants access financial aid, similar to what was reported by Rounds 1 and 2 colleges overall (figure 2.9). As shown in table 3.3, 13 colleges did so, working closely with the campus financial aid office for scholarships or Pell grants, or with the public workforce system to identify other sources of financial support. A few colleges provided uniforms, equipment, or training gear for specialized training programs, such as machining/welding (NEIT), health care (Roane State), and energy and construction trades (Bismarck State and Turtle Mountain). Nine colleges provided direct referrals so participants could obtain assistance for child care, transportation, housing, utilities, or other living expenses. Four colleges provided access to an emergency assistance fund (Turtle Mountain, Laney, Central Lakes, and St. Cloud). Edmonds granted participants a tuition waiver for the online course.

During the focus group discussions, some participants across projects reported that they received financial aid to attend the grant-funded programs through Pell grants and other programs. Others paid out-of-pocket expenses for the programs. A few participants indicated that more information could be offered about financial aid options during orientation.

TABLE 3.3

Financial Supports Offered by TAACCCT Colleges Visited

TAACCCT College	Financial Stability Supports			
	Assistance accessing financial aid	Access to uniforms, equipment, or training gear	Referrals to obtain assistance for child care, transportation, housing, utilities, or other expenses	Provide access to emergency assistance fund
Monroe Community College	✓		✓	
Cayuga Community College	✓			
New England Institute of Technology	✓	✓	✓	
Northern Virginia Community College	✓		✓	
Shoreline Community College	✓		✓	
Roane State Community College	✓	✓		
Northeast State College	✓			
Bismarck State College		✓		
Turtle Mountain Community College	✓	✓	✓	✓
Bossier Parish Community College				
Meridian Community College	✓		✓	
Vincennes University				
Central Lakes College Consortium	✓		✓	✓
St. Cloud Technical & Community College	✓		✓	✓
Laney College	✓		✓	✓
Contra Costa Community College	✓			
Edmonds Community College		✓		

Source: TAACCCT Round 2 site visit interviews, 2016.

Supporting academic success. Eleven colleges had tutors available to assist participants, as well as on-campus resources for participants, as shown in table 3.4. Although only one college had a formal mentoring program, faculty and instructors were often described by staff and participants as having a mentor-like role. Campus tutors were available to assist with math and English. Ten colleges provided academic preparation and course support. Thirteen colleges also had an academic advising component. To assist returning veterans with the career pathways programs, four projects provided additional supports that were coordinated with on-campus or community resources. Tailored services were also available for students with disabilities at five colleges. Comparatively, 54 percent of Rounds 1 and 2 colleges responding to the survey reported providing enhanced academic support, such as tutoring (table 3.4).

TABLE 3.4

Academic Supports Offered by TAACCCT Colleges Visited

TAACCCT College	Academic Supports				
	Tutoring	Academic advising	Academic preparation and course support	Veteran outreach and advising	Students with disabilities services
Monroe Community College	✓	✓		✓	✓
Cayuga Community College		✓	✓		
New England Institute of Technology	✓	✓	✓		
Northern Virginia Community College		✓	✓		
Shoreline Community College	✓	✓	✓	✓	✓
Roane State Community College	✓	✓	✓		
Northeast State College	✓	✓	✓		
Bismarck State College		✓	✓		
Turtle Mountain Community College	✓	✓			✓
Bossier Parish Community College	✓				
Meridian Community College					
Vincennes University					
Central Lakes College Consortium	✓	✓	✓	✓	✓
St. Cloud Technical & Community College	✓	✓	✓	✓	
Laney College	✓	✓			
Contra Costa Community College					
Edmonds Community College	✓	✓	✓		✓

Source: TAACCCT Round 2 site visit interviews, 2016.

Serving as instructors and tutors. For several colleges, the instructors served as tutors and provided additional assistance with program-related coursework (Bismarck State, Bossier Parish, Turtle Mountain, Monroe, Meridian, Roane State, and Edmonds). They gave hands-on and remote assistance. At Turtle Mountain, all the *TREND* instructors served as tutors, going “above and beyond” to supplement instruction. Participants enrolled in Turtle Mountain’s programs shared that they went to their instructors for guidance and assistance. At Bismarck State, participants noted that they went to their instructor for guidance; instructors also directed them to YouTube videos for additional instruction or practice. At Edmonds, participants in the *PACE-IT* program received additional support in the on-campus lab as well as having online instructors available via Skype for one-on-one assistance. Participants noted that instructors prepared videos to complement the course reading, noting that they were useful and of high quality. At times, due to the number of participants enrolled in the online courses, Edmonds would bring on a part-time assistant to assist the instructors.

“If you have a question about how what you are learning relates to the real world, you have your teachers who have experience working in the industry who can tell you what it’s really like.”

- TAACCCT participant

Faculty at Contra Costa worked together to address participant needs. One participant observed that the program staff “want[s] you to treat the course like it is your job.” At Shoreline, the navigator arranged for the tutoring center to have manufacturing tutors. Using what the college referred to as the “genius” model to provide additional support, participants who excelled in the programs were referred to the tutoring center to become tutors themselves. By creating work study positions, the navigator was also able to provide additional in-classroom support to participants.

Aligning tutoring with advising. Colleges often aligned instructor-led tutoring with academic advising, thus increasing the person-centered focus on student retention and education attainment. Nine colleges did so, although for eight of them, it was not structured as an explicit advising model (Monroe, Shoreline, Roane State, Northeast State, Turtle Mountain, Central Lakes, St. Cloud, Laney, and Edmonds). Participants at St. Cloud felt that academic advising was helpful, and they praised the adviser’s subject knowledge, personal level of interaction, accessibility, and assistance with keeping them on track. Participants at Roane State reported that they worked with the completion coaches to help them navigate through the course offerings. At Meridian, participants noted getting additional help from team teaching (based on the I-BEST model). Participants at Laney found that instructors were more intimately connected (and available) to them compared to teachers they have had in the past.

Offering personal supports to foster retention. The colleges had various supports in place to assist participants, as noted in table 3.5. Half of the colleges provided case management services for participants to provide support in meeting work and family responsibilities, in addition to their coursework. Eight colleges also provided access to counseling through on-campus or community services, although this was not a direct service provided by the colleges. Rather, when an emergency came to the attention of an instructor or career navigator, project staff would direct participants to on-campus counseling services.

TABLE 3.5

Personal Supports Offered by TAACCCT Colleges Visited

TAACCCT College	Personal Supports					
	Mentoring	Case management	Financial literacy	Life skills training	Coaching	Counseling
Monroe Community College					✓	✓
Cayuga Community College						
New England Institute of Technology		✓		✓		✓
Northern Virginia Community College		✓	✓			✓
Shoreline Community College		✓			✓	✓
Roane State Community College						✓
Northeast State College						
Bismarck State College						✓
Turtle Mountain Community College			✓			✓
Bossier Parish Community College		✓				
Meridian Community College	✓	✓		✓	✓	✓
Vincennes University						
Central Lakes College Consortium		✓			✓	
St. Cloud Technical & Community College		✓			✓	
Laney College						
Contra Costa Community College		✓				
Edmonds Community College						

Source: TAACCCT Round 2 site visit interviews, 2016.

Colleges offered counseling to address problems and prevent a participant from dropping out of the program. As career navigators got to know the participants well, they tended to address concerns about balancing work, family obligations, and training as they arose. To a lesser extent, colleges provided financial literacy and life skills training, and coaching and mentoring. By comparison, 20 percent of all Rounds 1 and 2 colleges provided peer support groups or peer mentors (table 2.2), 55 percent provided financial counseling at their institution, and 74 percent provided case management or proactive advising at their institution (figure 2.9).

Referring participants to sources of public support. Nine colleges had processes in place to refer participants who were low-income or displaced workers to social services to obtain housing, food, or medical assistance, as shown in table 3.6. Bossier Parish and its partner, Meridian, created a student

services toolkit that included outside resources that career navigators could refer participants to. Three colleges also worked closely with on-campus or local Veteran’s Affairs Centers to address needs (Monroe, Cayuga, and Shoreline). Assistance to veterans was all-encompassing, focusing on personal and academic supports and accessing community resources. Participants noted that the assistance and supports received through the campus-based veterans’ centers helped address their needs.

At Shoreline, participants reported that the career navigators effectively connected them with supportive services, such as housing and transportation assistance. Participants enrolled in Contra Costa’s forklift, logistics, operations, and warehousing program described multiple sources of support, including help from the American Job Center with transportation, and assistance from the Temporary Assistance for Needy Families office with filling out applications for federal financial aid, fee waivers, and transportation assistance. Vocational rehabilitation also helped participants with clothes and transportation. Participants at Meridian remarked that that, along with program referrals to the American Job Center, the program catalogued an array of supportive services for participants to seek available resources in the community. Participants noted that they could “talk to the career navigator, professors, and staff about any concerns, and they’ll work with you.”

TABLE 3.6

Public Supports That the TAACCCT Colleges Visited Helped Participants Access

TAACCCT College	Public Supports		
	Referrals to social services (for housing, food, and medical assistance)	Veteran services	Access to transportation services
Monroe Community College	✓	✓	
Cayuga Community College		✓	
New England Institute of Technology	✓		✓
Northern Virginia Community College			
Shoreline Community College	✓	✓	
Roane State Community College			
Northeast State College			
Bismarck State College	✓		✓
Turtle Mountain Community College	✓		✓
Bossier Parish Community College	✓		
Meridian Community College	✓		
Vincennes University			
Central Lakes College Consortium			✓
St. Cloud Technical & Community College			✓
Laney College	✓		✓
Contra Costa Community College	✓		
Edmonds Community College			

Source: TAACCCT Round 2 site visit interviews, 2016.

Providing support for career transitions. All 17 colleges provided an array of career transition supports to participants. While most Rounds 1 and 2 colleges offered career services (figure 2.10), those offered by the colleges were individualized and industry-specific. As shown in table 3.7, each college had one or more core components that focused on job readiness and placement. Instructors, career navigators, and employers were very involved in these efforts. Thirteen colleges provided some form of career counseling or career navigation support. Ten colleges assisted with preparing cover letters and résumés, as well as developing portfolios. Staff, faculty, and employer partners at nine colleges conducted mock interviews or helped participants prepare for interviews. Ten colleges held job readiness training, with an emphasis on soft skills. Three colleges augmented this training with a work ethics course.

Ensuring participants were prepared for jobs. Colleges provided staff to work closely with participants and coordinate services to ensure they were prepared for the workforce once they completed their program of study. Participants at Turtle Mountain participated in a one-credit job readiness course during which they prepared résumés, filled out job applications, and developed self-presentation and interviewing skills. Some participants observed that their “résumés change all of the time because they gain new skills” and emphasized the importance of keeping it up-to-date. Colleges invited speakers to attend, especially representatives from Job Service North Dakota. The job readiness program also addressed interviewing and self-presentation. One participant noted that the course “help[ed] you in being more professional for an interview.”

Bismarck State required that its lineworker program participants do an informational interview with a prospective employer and provide feedback to the advisory board. An added advantage of the lineworker certification program was getting a CDL license and Occupational Safety and Health Administration safety card. Participants noted that “we do exactly what we will do for the job as a lineworker” and expressed confidence that they would get a job. Between the job fairs, active company recruitment, self-initiative, and instructor connections, they noted that there were multiple paths to finding a job.

TABLE 3.7

Career Transition Supports Offered by TAACCCT Colleges Visited

TAACCCT College	Career Transition Supports											
	Career counseling/navigation	Résumé assistance	Interview preparation	Networking	Job fairs	Internships	Job search and placement	Field trips/industry tours	Job shadowing	Career workshops	Job readiness	Work ethics course
Monroe Community College			✓	✓	✓		✓	✓				
Cayuga Community College	✓	✓		✓	✓		✓					
New England Institute of Technology	✓	✓	✓	✓			✓	✓		✓	✓	
Northern Virginia Community College	✓	✓	✓	✓		✓	✓				✓	✓
Shoreline Community College	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	
Roane State Community College							✓	✓				
Northeast State College							✓					
Bismarck State College	✓	✓	✓		✓	✓	✓	✓	✓		✓	
Turtle Mountain Community College	✓	✓	✓	✓	✓	✓	✓	✓			✓	
Bossier Parish Community College	✓						✓				✓	✓
Meridian Community College	✓	✓	✓			✓	✓				✓	✓
Vincennes University (IN)	✓											
Central Lakes College Consortium	✓	✓	✓		✓	✓	✓	✓		✓	✓	
St. Cloud Technical & Community College	✓	✓	✓		✓	✓	✓	✓		✓	✓	
Laney College							✓	✓				
Contra Costa Community College	✓	✓	✓		✓		✓				✓	
Edmonds Community College	✓			✓	✓	✓	✓					

Source: TAACCCT Round 2 site visit interviews, 2016.

“The adviser took me to an IT [information technology] stream [career pathway] that leads to a job. I email or meet in person with the success counselor. I’ve taken 15 credits per semester; I have one class left, and then I’m graduating. Now, I have a career adviser who is helping me with my résumé, etc. My new career adviser is helping me set my goals for the future. She points out jobs and tells me to check something. The last semester I did an internship.”

- TAACCCT participant

The career navigator at Shoreline arranged Work Study programs and internships, provided job readiness training and reviewed résumés, and assisted with job development and placement assistance. Similarly, the career navigators at Bossier Parish provided job search and placement assistance. Information technology participants at Bossier Parish liked being able to ask the job developer various job-related questions and seek their advice. Having placed 80 percent of the past cohort into jobs, the job developer at Contra Costa instilled confidence in the participants of the current cohort. Participants emphasized that the project staff helped them find jobs that were appropriately aligned to their skills and desires, even if jobs were not specifically focused on warehousing and logistics.

Supporting participant job searches and networking with employers. Many colleges were actively involved in the job search and placement process. Faculty and instructors served as intermediaries between employers and participants regarding job openings. Machining participants at NEIT commented that their instructors helped to place them with an appropriate employer, and welders were set up with interviews at a local employer as they concluded training. At least seven colleges tapped their professional networks to make connections for individual participants. Colleges hosted networking events to facilitate connections on a broader scale for a participant cohort. Employer partners participated in job and career fairs that were hosted by at least nine projects. Participants were then recruited by employers, and sometimes offered a position on the spot. Field trips and industry tours, held by nine colleges, gave participants a firsthand view of work in manufacturing, construction, energy, health care, and logistics. Participants at Cayuga noted the value of the tours with potential employers, emphasizing that the program “creates relationships with local companies and does a lot of networking.” At Laney, participant exposure to the job market increased dramatically, as the grant funding supported participant field trips to employer sites, for employers to come to classes, and for

former participants to come and talk about their experiences in the industry with current participants. Meridian had employers and human resource personnel meet with participants.

Exposing participants to workplace culture. Colleges gave participants exposure to the workplace, including industry attendance policies and on-the-job behavioral norms, in multiple ways. At NOVA, learning about the workplace gave participants in the C2C program—who were recent immigrants—insights into the workplace norms that they did not realize existed. Instructors emphasized workplace culture and soft skills in the labs or in the field. Faculty and instructors described these activities as similar to operating in a professional setting, saying, “We run it like a real job.” Surgical technology participants at Roane State noted that at orientation they were told the “program would act as a fulltime job.” Bossier Parish and Meridian also offered soft skills workshops.

3.5. The Roles and Contribution of Partners in Grant Implementation

This section provides an understanding of the various partnerships the Round 2 colleges developed or strengthened as part of their local projects. Strategic alignment with key stakeholders and systems was one of five core elements of the Round 2 grants. DOL required grantees to coordinate with employers and industries, the public workforce system, and educational institutions and other organizations (e.g., philanthropic and nonprofit organizations) to align their projects with the local workforce needs.⁷⁰ The partners interviewed included employers; business, trade, or industry organizations; economic development organizations; local workforce development boards; American Job Centers; public social services agencies; education and training providers; community- and faith-based organizations; and technical assistance providers.

All 17 colleges partnered with area employers, and 13 colleges also partnered with a business, trade, or industry organization. Almost all (16) colleges worked with their American Job Centers, while 13 also partnered with their local board. Thirteen colleges partnered with at least one local education provider, and nine partnered with a local community- or faith-based organization. Only a few (eight) colleges partnered with economic development or social services agencies, and four colleges partnered with an organization to provide technical assistance during grant project implementation.⁷¹

⁷⁰ For more information, see pages 6–7 of the Round 2 grant announcement, found at https://www.doleta.gov/grants/pdf/taaccct_sga_dfa_py_11_08.pdf.

⁷¹ See appendix table E.24 for more details on the types of partnerships for the colleges visited.

These are the key findings from this section:

- Employers ranged from being very involved in grant-funded activities to having little involvement in the grant activities. Involved employers served on advisory boards, contributed to curriculum design, provided or donated equipment, provided career networking and transition opportunities for participants, and hired participants.
- All colleges, except for one, partnered with the public workforce system, either through the local workforce development board, American Job Centers, or both. The main roles of public workforce partners were referring individuals to education and training programs, providing job placement services to participants, or coordinating or advising project leadership.
- Fifteen colleges stated they received referrals from American Job Centers or other public employment agencies, such as Tribal Employment Rights Offices or Departments for Rehabilitation. Some colleges enhanced the referral and job placement process through colocation.
- Most colleges named education providers, including other community colleges, universities, and public school systems, as central partners in the implementation of the grant. Educational institutions played a variety of roles, including recruiting and referring participants to the program, offering supplementary training to participants, sharing curricula or best practices through peer learning, and general coordinating activities. Several colleges partnered with educational institutions for peer learning and sharing of curricula and course content.
- Ten of the colleges had partnerships with community- or faith-based organizations. These partners recruited participants for the programs or provided training or supportive services to participants. For some colleges, community partners were an important source for recruiting participants who might not otherwise have access to or feel comfortable with community college programs.
- Other main types of partners were industry associations, technical assistance providers, and government agencies other than the public workforce system. Eleven colleges partnered with industry associations, which played similar roles as employer partners. Industry associations provided input on course content and helped with outreach and networking. Four colleges benefitted from technical assistance provider partners. About a quarter of colleges included government agencies (outside of the public workforce system) among their main partners.

Employer Partners

The 23 employer partners that were interviewed were involved in grant activities with the Round 2 colleges visited. These employers varied by industry, size, and whether they were hiring new workers or training their incumbent workforce. Six employers represented the manufacturing sector; four represented machining; three represented health care; two in information technology; and two represented warehousing. The remaining eight employers represented one of the following industries: transportation, plastics, education, human resources, food and beverage, and temporary staffing. Of the 16 employers that reported their firm's size, nine had 50-300 employees; four each had 1,000 or more employees; and three had fewer than 50 employees. Nine out of 23 employers reported that they both hired new employees and used grant-funded programs to train their employees. Five employers

reported that they only had employees receiving grant-funded training. Most employers (13 of 23) were not always aware of whether their employees received training through a grant-funded program.

As reported by project directors and staff, employers ranged from being very involved in to having little involvement in the grant activities. They contributed to the grant activities by serving on an advisory board, contributing to curriculum design, providing or donating equipment, providing career networking and transition opportunities for participants, and hiring participants (see table 3.8).

TABLE 3.8
Roles of Employer Partners for Local TAACCCT Colleges

TAACCCT College	Employer Partner Role				
	Serve on advisory board	Contribute to curriculum development	Provide or donate equipment	Provide career networking & transition opportunities	Hire participants
Monroe Community College	✓	✓	✓	✓	✓
Cayuga Community College	✓	✓	✓	✓	✓
New England Institute of Technology	✓	✓		✓	✓
Northern Virginia Community College	✓	✓		✓	✓
Shoreline Community College	✓	✓	✓	✓	✓
Roane State Community College	✓	✓	✓	✓	✓
Northeast State College		✓		✓	✓
Bismarck State College	✓	✓	✓	✓	
Turtle Mountain Community College	✓	✓		✓	
Bossier Parish Community College	✓	✓	✓		✓
Meridian Community College		✓	✓		✓
Vincennes University	✓	✓	✓	✓	✓
Central Lakes College Consortium	✓	✓	✓	✓	✓
St. Cloud Technical & Community College	✓	✓	✓	✓	✓
Laney College	✓	✓	✓	✓	✓
Contra Costa Community College	✓	✓	✓	✓	✓
Edmonds Community College	✓	✓		✓	

Source: TAACCCT Round 2 site visit interviews, 2016.

Four employers at three colleges (Monroe, NEIT, and Laney) indicated deep involvement most or all of these activities. Six employers at five colleges (Bossier Parish, Edmonds, Los Medanos, Meridian, NEIT) were moderately involved, participating in a few of the listed activities. Three employers at three colleges (Edmonds, NOVA, Roane State) were involved only by providing work-based training or an internship, and six additional employers at three colleges (Central Lakes, NOVA, and Vincennes) reported little involvement with the grant activities. The remaining four employers did not recall involvement in any grant activities.

Serving on advisory boards. Serving on an advisory board was common role for employers, with all but two colleges reporting having one or more employers serve on an advisory board (table 3.8). The way in which colleges convened advisory boards varied but was not always an accurate indicator of employer engagement. For example, Bismarck State leveraged an extensive network of industry and employer partners from around the state through the National Energy Center for Excellence. Bismarck State convened in person with industry and employer partners once or twice a year and held quarterly in-person meetings with the *TREND* colleges. At the NEIT, employers played an important role on an advisory board that met twice a year, but instructors and case managers had interactions with employers on a near daily basis.

In some cases, different employers were involved to varying degrees, and sometimes colleges formalized their involvement. For example, Bossier Parish strategically engaged employers by first bringing as many of them to the table as possible to learn about their needs. Then, interested employers were offered different tiers of partnership to allow for different levels of involvement. Bossier Parish also held award ceremonies to honor their top partners.

Contributing to curriculum development. As table 3.8 shows, all colleges had employers engaged in curriculum development and/or review. Some employers reported deep involvement in curriculum development, while others reported reviewing already-developed curriculum. At NEIT, administrators viewed the *SAMI* program as “reverse engineered” because the design of the program started with the skill requirements for various jobs as defined by employers. The two *SAMI* programs were well connected to employers. Staff sought employer input to ensure that curricula and equipment used during the training process resulted in program graduates with the skills needed to enter machinist and welder positions paying self-sustaining wages (usually starting at \$14-16 per hour).

At St. Cloud, employers, in addition to industry association and public workforce system partners, provided significant input on curriculum design. For example, one machine program at St. Cloud that was shortened from two years to 11 months based on employer feedback that the program took too long to complete. The college ended up changing the program length back to two years when employers found that graduates were not adequately trained in 11 months. Additional information on employer contributions to curriculum development can be found in the Project Implementation section.

Employers working with two different colleges—Edmonds and the Central Lakes—used online learning to train new and incumbent workers. These innovative methods of engaging employers and providing training were beneficial for many reasons. For example, online learning reduced training costs for community colleges and reduced or eliminated the lost work time for incumbent workers receiving

training. Virtual learning environments could be used to provide training for new and incumbent workers in rural areas without easy access to a community college. At Edmonds, self-paced, modularized e-learning was increasingly in demand by employers to train information technology professionals and to obtain needed certifications for employees. In Minnesota, Central Lakes used the virtual learning environment to partner with the Department of Corrections to provide training to inmates to prepare them for employment upon release; in this case, this technology was used not just for incumbent workers but also for new workers. Box 3.9 provides an example of working with employers to bring training to rural areas through technology.

BOX 3.9

AME Alliance Works with Employers to Develop Online Training for Rural Areas

To address a worker shortage and a lack of training available in rural areas, *AME Alliance* offered two types of advanced manufacturing training: traditional degree and certificate programs for community college participants on site at the three colleges and a hybrid of online and virtual learning that provides for-credit, customized training for incumbent workers at numerous employer partners. Through mediated telepresence programming, the *AME Alliance* had over 75 employer partners—ranging from small employers to companies with several thousand employees—located in rural areas and in small cities around Minnesota.

Employers helped develop the mediated telepresence model and provided continuous feedback to the *AME Alliance* on the courses. Several employers could enroll their incumbent workers in a mediated telepresence training class that included both video conference lectures viewed during the work day and online assignments to be completed at home. A single employer could also request a class to serve only their employees. To receive mediated telepresence learning on-site, employers were required to provide an on-site classroom, in some cases through renovation, and the necessary equipment where workers could attend the video conference. In most cases, employers were also paying for tuition, required books, and their employees' wages for time spent in class during the work day.

Source: TAACCCT Round 2 site visit interviews, 2016.

Donating and providing advice on equipment. Donating equipment, supplies, and/or reviewing and approving equipment purchases were reported to some degree by most employers interviewed. Employers engaged with 12 colleges reported providing resources to support programs of study, such as equipment and facilities (see table 3.8). A few employers reported legal issues with donating equipment (e.g., transferring ownership) and on-the-job training (e.g., insurance and safety). Another employer reported that the reason they donated equipment was to ensure that the technology being taught was current. Five employers working with three colleges reported that they reviewed equipment

purchases for the colleges. In some cases, this was to ensure that the equipment participants were training on was the same as that used by the employers so the training was relevant to current jobs.⁷²

Providing career networking and transition opportunities. Employers also provided career networking and transition opportunities, such as providing tours of the employer site; offering internships; attending job fairs; conducting mock interviews; and mentoring participants. As shown in table 3.8, employers reported these types of involvement at all but two colleges.

Nine employers (partnering with six colleges) reported providing tours of their site or shop. For example, at Roane State, both health care employers reported giving participants tours of the hospital during their clinical rotations. Employers engaged with Bossier Parish reported presenting information to participants about their companies, running “speed interviews,” and conducting mock interviews. Through these efforts, instructors at Bossier Parish ensured that participants were cognizant of employers’ time and that participants’ expectations about employment opportunities were realistic.

Some employers also participated in job fairs with participants. Both Bismarck State and Turtle Mountain held job fairs to connect employers to participants. In some localities where there was a shortage of qualified workers, employers hired participants directly from grant-funded programs, and job fairs would not have been necessary. One employer at NOVA and another at Edmonds reported serving as a mentor to participants.

“We regularly tour students through here. We give them a tour; they talk to our machinists. We’ve hired several of their students. It’s beneficial to both parties.”

- TAACCCT employer partner

Hiring TAACCCT participants. A key goal of the TAACCCT grant program was to improve employment outcomes for participants so employers hiring graduates was an important component of the grant activities. In 14 colleges, employers reported hiring participants graduating from grant-funded programs, as shown in table 3.8. Five employers were only training incumbent workers and, therefore, would not report hiring.

⁷² More information on employers and equipment can be found in the Equipment, Facilities, and Infrastructure section.

In many cases, hiring participants was the culmination of prior employer engagement. For example, an employer at Bossier Parish provided mock interviews with participants and ended up hiring some of them. An employer engaged with Shoreline reported that they often hired participants after their internships. In another case, an employer working with Los Medanos College/4CD, developed an apprenticeship program designed to prepare applicants for full-time employment. This employer was a civil service employer, however, and the apprentices would be ranked on a list among other prospective employees according to test scores and other requirements and hired according to that ranking.

Public Workforce System Partners

All colleges visited, except for one, partnered with the public workforce system, either through the local workforce development board, American Job Centers or other workforce agencies, or both. The main roles of public workforce system partners were referring individuals to the grant-funded programs, providing job placement services to participants, or coordinating or advising project leadership.

Fifteen colleges indicated that they received referrals from American Job Centers or other public employment agencies, such as Tribal Employment Rights Offices or Departments for Rehabilitation. Some colleges enhanced the referral and job placement process through co-location. For example, one of NOVA's major accomplishments under the grant was starting an American Job Center on one of its campuses. The campus was in an emerging growth area for information technology—the industry focus of the local project—and had been previously underserved by the public workforce system. NOVA used grant funds to construct the American Job Center office within existing campus space and to pay for the manager. Cayuga also shared a building with an American Job Center, enabling direct referrals. At Meridian, one of the staff members of the college, a job developer, used an office at the American Job Center. Maintaining a presence at the center helped facilitate referrals between the center and the college.

At least one college had a formal contractual relationship with the public workforce system. Shoreline contracted with the Seattle-King County Workforce Development Center, the local American Job Center, to recruit veterans and TAA-eligible workers for the grant-funded program. The Workforce Development Center subcontracted with a local community-based organization that had ties to the veteran community and was charged with recruiting 10 people for the program every quarter.

Among the colleges, the closeness of the relationship with the public workforce system varied. Monroe staff indicated that they had a “strong working relationship” with the local workforce development board, RochesterWorks!, whereas other colleges in the consortium did not work as closely

with their local boards. Staff at Vincennes called the partnership with EmployIndy “outstanding” and noted that the relationship with the public workforce system had strengthened because of the grant. On the other hand, Bossier Parish did not have a close partnership with the public workforce system due to personnel changes and a lack of TAA-eligible workers to refer.

Education Provider Partners

Most colleges named education providers, including other community colleges, universities, and public school (kindergarten through 12th grade) systems, as central partners in the implementation of the grant.⁷³ Educational partners played a variety of roles, including recruiting and referring participants to the grant-funded program, offering supplementary training to participants, sharing curricula or best practices through peer learning, and coordinating activities. This section does not include transfer and articulation agreements with colleges and universities, which are discussed in the Program Implementation section.

Eight colleges received referrals from other education providers. Although targeting youth was not a focus of the TAACCCT grant program, colleges such as Central Lakes and St. Cloud used their preexisting relationships with the K-12 school systems to recruit graduating high school students to the grant-funded programs. The *Rx for Tennessee* consortium, including Roane State and Northeast State, obtained referrals from the Tennessee Colleges of Applied Technology for the LPN-to-RN program. Tennessee Colleges of Applied Technology provided training for LPNs but not RNs, so they could refer participants to *Rx for Tennessee*, helping them advance along their career pathways.

A few education partners offered additional training to participants. Meridian took advantage of its proximity to Mississippi State University to offer basic computer classes to participants in the evenings. Shoreline had an agreement with South Seattle College to hold precision machining classes on their campus. This arrangement increased the reach and enrollment of the manufacturing program, which was quickly outgrowing the physical space on Shoreline’s campus. Staff members described the partnership as a way to “open doors to participants in that area and another pool of employers” and make training accessible to people for whom transportation was a barrier.

Twelve colleges partnered with educational institutions for peer learning and sharing of curricula and course content. This type of relationship was encouraged among member colleges in consortia. The C2C consortium, including NOVA and Shoreline, met semiannually for peer learning on different topics.

⁷³ Unless otherwise noted, the education partners described in this section were not cogranterees or member colleges of consortium grants.

Staff members described these gatherings as very beneficial. Bossier Parish and Meridian also utilized peer learning to implement the I-BEST model for their consortium. Edmunds, which implemented a competency-based information technology training program, partnered with Washington Governor's University, a pioneer in this model of education, to help develop their programming. The 360 Center for Advanced Manufacturing, a part of Bemidji State University and a member college for the consortium grant, provided the curricula for the mediated telepresence courses of the *AME Alliance*, including Central Lakes and St. Cloud. Finally, Turtle Mountain had close relationships with other tribal colleges, resulting in useful exchange of strategies.

Lastly, education partners also coordinated services across institutions. For instance, the Bay Area Community College Collaborative worked with Laney and other colleges to make sure training and services were not duplicated.

Community- and Faith-Based Organization Partners

Ten colleges had partnerships with community- or faith-based organizations. These partners provided support services, helped to recruit participants for the programs, or provided additional training to participants.

For six colleges, community partners were an important source for recruiting participants who might not otherwise have access to or feel comfortable with community college programs (see box 3.10 for an example). At Laney, grant funds were used for an outreach coordinator to go to local churches and community-based organizations to get the word out about the program. Shoreline received referrals from a community-based organization subcontractor to the local workforce development board that networked with veterans' organizations to recruit participants to the program. Vincennes worked with Volunteers of America to place people who had been involved in the criminal justice system in the CDL training program.

Several of the community partnerships went beyond referrals. Eight colleges provided support services and two provided additional training to participants. Man Up, Inc., a nonprofit organization that works with men of color, especially those who have been involved in the criminal justice system, partnered closely with NEIT not only to refer its participants to the programs, but to provide ongoing support and case management to those participants. Contra Costa Community College staff emphasized that community-based organizations provided "integral" wraparound support services, including financial planning services, credit counseling, career coaching, and job placement, to its participants.

BOX 3.10

NOVA Community Partnership

For NOVA, partnering with community-based organizations was central to the design of the TAACCCT project. The college leadership who wrote the grant application envisioned helping low-income individuals and families through collective action. One interviewee said that CBOs that have close ties to communities help community colleges reach individuals “who never would have seen themselves as community college students.” The main community partner for the project was Northern Virginia Family Service, which provided training for administrative and clerical positions as well as supportive services and job placement services to low-income individuals through its Training Futures program. NOVA used TAACCCT funds to support Training Futures and awarded college credit to participants. In a focus group, Training Futures participants said they never would have thought they could be successful in college, but the program allowed them to earn college credit without even having to go to campus. Some of these participants went on to pursue additional training at NOVA or were placed in permanent employment by.

Source: TAACCCT Round 2 site visit interviews, 2016.

One of the most involved set of community-based organizations was at Bossier Parish. Community-based organizations provided referrals, support services, and additional training. Bossier Parish’s main partner, Goodwill, was interested in participating in the local grant project because of the fit with its mission: “Helping people find jobs and training them to advance in their careers aligns with our work.” Goodwill provided training in soft skills and career readiness for Bossier Parish. The organization also provided supportive services, such as clothing, for low-income participants.

“Every partnership is a two-way street. We’ve offered free training for referrals in return for free service for the participants. It’s almost like a bartering arrangement. We don’t hesitate to call partners, and they’ll call us for a person who wants to start [the program].”

- TAACCCT grant director

Other Partners

As shown in table 3.9, the other main types of partners were industry associations, technical assistance providers, and government agencies other than the public workforce system. Eleven colleges partnered with industry associations, which played similar roles as employer partners. Industry associations provided input on course content and helped with outreach and networking. The AME Alliance, including

Central Lakes and St. Cloud, partnered with the Central Minnesota Manufacturing Association, which participated on the consortium's advisory board and recruited employers to participate. Shoreline, Monroe, and Cayuga also described strong working relationships with local and regional manufacturing associations.

TABLE 3.9

Roles of Other Partners for TAACCCT Colleges Visited

TAACCCT College	Other Partner Roles			
	Provide technical assistance	Provide input into program design	Provide referrals or networking	Provide support services
Monroe Community College		Industry associations		
Cayuga Community College		Industry associations		
New England Institute of Technology		Industry associations		
Northern Virginia Community College	Aspen Institute			
Shoreline Community College	Aspen Institute	Industry associations	Industry associations	
Roane State Community College		Industry associations		
Northeast State College				
Bismarck State College		Department of Commerce		
Turtle Mountain Community College			Trade unions	Bureau of Indian Affairs
Bossier Parish Community College	NCWE and NCTN			
Meridian Community College	NCWE and NCTN		Department of Rehabilitation Services	
Vincennes University		Industry associations		
Central Lakes College Consortium		Industry associations	Department of Corrections; Industry associations	
St. Cloud Technical & Community College		Industry associations		
Laney College		Industry associations		
Contra Costa Community College		Industry associations	Economic development organization	
Edmonds Community College		Industry associations	Professional and industry networks	

Source: TAACCCT Round 2 site visit interviews, 2016.

Note: National Council for Workforce Education (NCWE) and National College Transition Network (NCTN).

Four colleges benefitted from technical assistance provider partners: the C2C consortium (NOVA and Shoreline) and *IT Pathways* consortium (Bossier Parish and Meridian). The C2C consortium received

assistance from the Aspen Institute which brought the consortium members together twice per year for peer learning conferences and helped with program design and development. The National Council for Workforce Education and Jobs for the Future helped the *IT Pathways* project implement the I-BEST model and the National College Transition Network helped the consortium implement PLAs and career navigation, drawing on lessons from across the country.

Some colleges also worked with regional or national industry associations. For example, the *Rx for Tennessee* consortium worked with the National Healthcareer Association to develop course content that was consistent across educational providers, enabling credit transfer and helping participants prepare for national certification exams.

About a quarter of colleges included government agencies (outside of the public workforce system) among their main partners. The *AME Alliance*, led by Central Lakes College, found a key partner in Minnesota's Department of Corrections, which offered the consortium's mediated telepresence courses to inmates to help them prepare for jobs upon release. The *TREND* consortium, including Bismarck State and Turtle Mountain, worked closely with the Bureau of Indian Affairs to provide job placement and support services like transportation and textbooks to its large population of native participants. The *TREND* consortium also worked with the state's Department of Commerce to develop the scope of work for the grant.

3.6. Key Lessons from the Round 2 Fieldwork

The evaluation team conducted site visits to Round 2 colleges during the last year of the grant period and offered project directors, faculty and staff, partners, and participants an opportunity to reflect on their experiences as the grants were coming to an end. This section describes interviewees' perceptions about the possibility for program replicability, future partnerships, major accomplishments, and lessons learned.

These are the key findings from this section:

- Features of TAACCCT projects that staff reported to be most replicable tended to focus on elements that required little infrastructure and were broadly transferable—regardless of the targeted industry sector. Some project directors felt that they had great success with career navigators, which could be easily replicated. Curricula developed and engagement of employers and other partners were often cited as strategies for replication.
- Project directors cited the opportunity to share best practices as a way that consortium member colleges benefited from working with their colleagues at other colleges. A challenge posed by implementing a complex grant like TAACCCT was the time-intensive nature of managing many stakeholders and encouraging joint decision making on project design.

- Most project directors expressed optimism about the sustainability of partnerships. Some colleges, however, had already seen partnerships come to an end or were unsure if they would continue after the grant ended.
- The most important accomplishments under the grant cited by project directors and staff were creating/enhancing curricular offerings, strengthening internal and external relationships, building capacity and changing the culture within colleges, and improving the lives of participants.
- Key lessons learned from participating in grant projects related to program management and implementation and stakeholder engagement. These included the importance of communication, effective leadership, buy-in at all levels, strong partnerships, flexibility in program administration and delivery, and dedicated staff assigned to key aspects of the grant.
- Most colleges planned to sustain the core aspects of their local projects such as new or enhanced programs of study and course offerings, though the availability of alternate funding streams to sustain projects remains a concern. In general, project directors most commonly reported that curricula—including the career pathways programs developed with grant funding—and equipment that would be used past the grant period were the most common elements that would be sustained in the future.

Program Replicability

When asked about the extent to which programs could be replicated in other departments within the college or in other localities, Project directors and staff felt programs could be replicated in their entirety or in part. Project directors and staff also recognized, however, that program replicability was contingent on several interrelated factors, and discussed the conditions under which replicability could be facilitated or hindered.

Features of local projects that were reported to be most replicable tended to focus on aspects of programs that require little infrastructure and were broadly transferable— regardless of the targeted industry sector. For example, Meridian (information technology), Shoreline (advanced manufacturing), and Roane State (health care) highlighted their use of career navigators or success/completion coaches as valuable intervention components for replication. Project directors felt that they had great success with career navigators, who provided a comprehensive array of academic supports and referrals to participants.

Newly-developed curricula were another often-cited area for replication. Curriculum transferability, moreover, was understood to be facilitated by standardization and accessibility. For Vincennes University, the CDL program was perceived as replicable in other locations because of the standardized curriculum that was developed. At Monroe, the core curriculum allowed for all community colleges in the SUNY system to have a common basis for advanced manufacturing certification with industry specialization. Bossier Parish’s Open Campus developed curricula that formed career pathways with stackable credentials which could be used by various types of organizations and

educational institutions and reinforced the “flipped classroom” approach, where students watch lectures online and instructors use class time to reinforce content. At Central Lakes, staff thought the mediated telepresence program was replicable because of the online format of the courses.

At the same time, classes that may be replicable because of their accessible format were not always the most successful in implementation. For example, staff at Vincennes considered their online supply chain class as easiest to replicate, but it did not perform as well as other classes, such as truck driving and warehouse operations, which require deep financial investments in equipment and infrastructure that can limit transferability. Once in place, however, staff felt these programs were highly replicable because of their standardization.

Other replicable elements involved strategies for engaging employers and other partners. Staff at NOVA believed that the expanded linkages with community-based organizations and employers established during the grant would not only be replicable but also lead to increased numbers of adult learners who might not otherwise attend community college and greater employment opportunities for participants. For Shoreline, staff saw employer engagement to gain input on curriculum and assist with internships and job placement as replicable.

Project staff also reported that their programs could be replicated at other colleges, although perhaps not always on the same scale. The success of program replicability was perceived to be contingent on several factors related to infrastructure and local needs, including industry demand for workers in particular occupations, strong employer linkages and tiered levels of involvement, faculty expertise, committed jobs, sufficient resources, and the availability of intensive support services and facilities.

Plans for replication were already underway during the last year of the grant period at some colleges. Five colleges reported that key features of their programs had been replicated or were in the process of replication. Roane State staff indicated that there was interest in replicating the model of the success/completion coach in other departments, and that three or four other community colleges in the consortium intended to adopt the same or similar model. Employers also approached Roane State to expand the noncredit health program in another county and campus. The noncredit instructors/curriculum developers were working with area schools and instructors to build the program and identify opportunities for clinical placement. Similarly, Vincennes was currently opening a second CDL training location. The curriculum and teaching materials had already been shared with the staff there. Laney staff noted that the contextualized math and English courses were being considered for adoption and adaptation by other career and technical departments on campus. At Edmonds,

competency-based, online learning was being considered by other departments. Leadership at Cayuga commented that other division chairs had been asking how to replicate the certificate model and to get employers in health services involved re-engineering their programs.

Benefits and Challenges of the TAACCCT Project Structures

Colleges that were single-institution grantees benefited from developed networks and knowledge of the local area and labor market, including staff members' knowledge of local worker shortages and community actors that had a reputation for getting things done. In addition, single-institution grantees generally tended to be less complex because everyone was local and there were fewer stakeholders to coordinate. With less coordination required between institutions, communication overall was more streamlined between project staff and partners.

For consortia, member colleges had the benefit of adapting an overall strategy or model developed through the consortium to fit their local context, while learning from partnerships with other institutions that might not have been possible without the grant. For example, Northeast State staff adapted the LPN-to-RN program for its local project. Each member college that was part of the *Rx for Tennessee* consortium worked through their respective leadership to prioritize a local project that aligned with the regional goals of the consortium.

The opportunity to share best practices and the exposure to other ways that member colleges were finding success in their projects was an oft-cited reason that consortia members enjoyed working with their colleagues at other colleges. Working as members of a consortium also allowed for the possibility for a larger footprint to be left by the grant activities, when member colleges and their local partners were actively involved, bought into an effort, and aligned their goals.

One challenge posed by implementing a complex grant like TAACCCT was the time intensive nature of managing many stakeholders and encouraging joint decision-making on project design. One staff person at a college leading a consortium described this process as determining “the logistics of how.” The challenge was not limited to large consortia; staff at single-institution grantees also expressed that getting their respective local projects off the ground also took much longer than anticipated, due to the number of stakeholders that had to be engaged.

Staff at some colleges commented that funding for projects' design was an unmet need, since there was not a specific allocation of funding for project planning. One college experienced a long planning process, which delayed the start of the grant activities and hindered meeting their performance goals. The need for a longer planning process was a challenge for colleges in consortia that crossed state lines,

because of the difficulty navigating differences in state laws, the governance of the varied community college systems, and the different needs across local labor markets.

Leadership and staff turnover, particularly at the project director level, posed a challenge as well. Maintaining institutional knowledge of the projects and which partners were reliable and committed partners was difficult when turnover occurred. In addition, all colleges had to find ways to drive their institutions toward partnership and a shared vision to meet the goals of the grant. This meant that some colleges had to emphasize partnerships to facilitate project success.

Commitment to a shared vision and goals was crucial, as was allowing for flexibility for colleges in consortia to implement local projects in ways that made sense for them. As mentioned above, Meridian worked to adapt their consortium's model to their needs and found success offering coursework in the information technology pathway through noncredit program in their workforce development department. That flexibility was also seen at Contra Costa, which implemented several more courses and support services strategies than Laney College, another member of the *DBS* consortium. These changes helped ensure that participants at Contra Costa—many of which faced economic and social barriers to success when compared to peers at Laney—had a better chance of success in their college's program.

Future of Relationships with Other Colleges and External Partners

For the most part, the experience with their grant projects helped colleges to establish and nurture relationships with colleges as a part of their consortium and a broad array of other external partners—employers, the public workforce system, other education and training providers—that were expected to continue. Several project directors and staff, as well as employers that supported grant activities, indicated that they would partner again or were already working together on Round 4 grants. Others noted that the partnerships were sustainable and a positive experience.

Staff from some colleges expressed ambivalence about participating in consortia, given the intensive time and management involved. For example, one staff person voiced uncertainty about engaging in a large multistate consortium again as achieving consensus on course content became a lengthy year-long process. While working within a consortium of colleges could present more challenges compared to single institutions, another staff person acknowledged that certain grant activities could not have been accomplished by one institution, and what the colleges learned from one another made the collaboration meaningful and useful.

For other colleges, relationships which existed prior to the grant were further strengthened through the grant activities. For example, all 13 of Tennessee's community colleges, including Roane State and Northeast State, are part of the Tennessee Board of Regents, which supervises public higher education institutions in the state. The timing of the grant coincided with the Tennessee Board of Regent's initiative to move all community colleges toward a common curriculum. The convergence of goals encouraged commonality and cooperation across the schools and colleges in the system and facilitated the implementation of *Rx for Tennessee's* curriculum consistency.

Most project directors expressed optimism about the sustainability of partnerships. Some colleges, however, had already seen partnerships come to an end or were unsure if they would continue after grant funding. Colleges that were awarded Round 4 grants, such as Bismarck State's *TREND* consortium and NEIT, demonstrated that partnerships would continue at least through the continuation of those grants. However, staff at NEIT were concerned about the future of the program, and therefore the partnerships, after the Round 4 grant ended. Shoreline staff were also doubtful about the sustainability of its partnerships. The relationship with the local workforce development board had already changed at the time of the visit, since funding for a recruitment contract had ended. In addition, Shoreline's memorandum of understanding with South Seattle College, which had provided additional space for training, was coming to an end as well.

On the other hand, some colleges had demonstrated sustainability of partnerships that were not reliant on continued grant funding. NOVA leadership, for example, was confident that the relationship with the public workforce system would continue through the SkillSource One-Stop Employment Center, an American Job Center, that was established on campus. Staff felt that the center had been "embraced and absorbed" by the college and SkillSource would fund the coordinator position after the end of the grant period.

Another example of sustainable partnerships was the *AME Alliance's* partnerships with employers and the Department of Corrections. The online mediated telepresence courses were well received by employers, which offered the courses to incumbent workers, and by the Department of Corrections, which offered the courses to inmates. Even though the cost of the courses would increase with the end of the grant, most employers said they would pay for them, and the Department of Corrections planned not only to sustain but expand the number of training slots for inmates.

Finally, many of the colleges' partnerships preexisted the grant funding. In these instances, staff were confident the relationships would continue. Monroe staff described its partnerships as "vital and

sustainable.” A staff person at Cayuga said the employer partnerships have “always been key, have grown, and will stay.”

Accomplishments of the TAACCCT Colleges

For the colleges visited, the most important accomplishments under the grant related to creating/enhancing curricular offerings, strengthening internal and external relationships, building capacity and changing the culture within colleges, and improving the lives of participants.

Nearly all of the colleges reported that a major success of the grants was the ability to offer new and expanded credit and non-credit bearing programs to their communities. One staff person observed that none of the programs at Contra Costa, in fact, would have existed without grant funding. Leadership at Cayuga echoed that view with respect to the lab creation for the *AME Alliance* project. New offerings, moreover, applied cutting-edge practices in state-of-the-art facilities and were delivered in geographic areas not previously served, widening the reach of colleges and accessibility to participants. Other staff emphasized the ability to leverage the grant to reinvigorate existing programs, including Monroe’s optical technology program, Cayuga’s plastics program, and Shoreline’s machine maintenance program.

Another key benefit of the grant was the varied partnerships that colleges developed and strengthened. Many reported deepening relationships with other community colleges, industries, and employers as an achievement of the grant. Several staff also observed the increased presence of industry at college events such as mock interviews, college fairs, and résumé workshops. Within the colleges, enhanced relationships across divisions were also attributed to the grant. Meridian staff saw the partnership between the career and technical education department and the college’s workforce division improve while NOVA staff began seeing internal walls dissolve between the Adult Career Pathways program and student services. Several colleges’ staff highlighted the grant’s role in changing institutional cultures to accept program innovation and the importance of shared governance and credential attainment.

The grants were also important for building capacity at the colleges, particularly with respect to capital improvements in classroom equipment and facilities that colleges typically would not be able to afford otherwise. Indeed, for career and technical programs, the tools of the trade are essential for participant learning and employability. The grant, which many described as “generous,” allowed colleges to update and purchase equipment, labs, and various supplies. Many of the investments in equipment made, moreover, were considered state-of-the-art and “made learning exciting and hands-on” for

participants, as one staff person noted. As one staff person noted, “The investments in equipment will live on for 20 years at the colleges. That is critical.”

Additionally, some colleges invested in human resources. Through the grant, college staff who were reassigned also grew professionally, particularly those for whom roles were new. Staff at two colleges expressed appreciation for the opportunity that the grant provided to develop and broaden their professional and grant management skills.

Lastly, almost all the project directors felt that making a difference in participants’ lives was the most important accomplishment. The successes pertained not only to education and job attainment, including certification and increased wages, but to their lives, developing participants’ character, confidence, and self-image. Several viewed the programs as not simply a means to obtain a degree, but a broader opportunity for participants to make a better life for themselves—to gain upward mobility, provide for their families, and acquire skills to make more than just a basic living wage. Some had been formerly homeless, sleeping in their cars, or were about to have their utilities cut off after having been downsized. Many staff, particularly instructors and career navigators, expressed pride and satisfaction in seeing participants succeed and knowing that they played a role in their success.

Implementation Lessons

Key lessons learned from participating in local projects related to program management and implementation as well as stakeholder engagement. These included the importance of communication, effective leadership and buy-in at all levels, strong partnerships, flexibility in program administration and delivery, and dedicated staff assigned to key aspects of the grant.

All project directors emphasized the importance of communication as a key lesson learned. Clear and transparent communication was viewed as critical for not only working effectively across institutions but also for engaging different groups and stakeholders. They also stressed the importance of early and frequent communication among partners and learning from mistakes. Conference calls and in-person meetings were the most common forms of communication, but Roane State also used Adobe Connect to support communication and program management across the consortium. Meetings were recorded and archived, allowing consortium partners to access the meeting later if they could not attend. The meeting records had the added benefit of facilitating transitions whenever staff turnover occurred, assisting the onboarding process.

The importance of having dedicated staff assigned to key aspects of the grant, including grants management, job development/placement, data collection, academic advising, and support services, was

a key lesson for many colleges. Data collection and tracking, in particular, posed a significant challenge for several colleges. Vincennes University recommended hiring or contracting out a data analyst. Bismarck State staff felt that colleges should provide partners with simple tracking tools so data collection and reporting is not burdensome. Bossier Parish's staff underscored the need for consistency in defining outcome measures prior to implementation, as changes during the grant caused data challenges.

Project directors also recognized the importance of effective leadership and institutional buy-in within and across colleges. In some instances, project directors in a consortium who did not have support from their leadership faced greater difficulties in participating in the grant. A few project directors also noted that support is required at all levels—from participants to faculty to the leadership of the school—for projects to be successful.

Given the grant's focus on employment as a successful outcome, the importance of forging close industry relationships was also a key lesson learned. Project staff indicated that employer engagement was critical for ensuring that participants have the skills that employers desire. For Contra Costa, understanding the employer's corporate culture also translated to better matches between participants and jobs. An employer partner working with Meridian felt that their involvement in informing the curriculum could provide participants with a clear idea of the occupations they will enter, preventing any surprises.

For curriculum and program development, project directors and staff emphasized providing professional development skills for staff and focusing on job readiness and placement. For Edmonds, the complexities of the curriculum development process were greater than expected. In hindsight, staff felt they should have added a professional development component to allow time and funds for instructors to become familiar with competency-based education and obtain new certifications.

Also essential to program success was ensuring that colleges had the freedom and flexibility to tailor individual programs, given the diversity of programs across colleges and their institutional missions, culture, and local needs. Staff from Bossier Parish noted the challenge of fitting nine colleges in two states into a single mold. As the lead entity in the *Rx for Tennessee* program, Roane State adopted a "servant-leadership" role and encouraged participating colleges to tailor the curriculum content and delivery to their specific context, and to call upon Roane State as a resource. Northeast State, one of the consortium members, embraced the flexibility allowed by combining two part-time positions into one full-time coordinator position to better fit staffing needs and adding tutoring to the completion coach's responsibilities.

The colleges also developed strategies to help participants who needed flexible schedules. Many of the colleges used technology to accommodate busy participants' schedules, especially those who were working students. *AME Alliance* members used mediated telepresence to deliver self-paced coursework. Roane State provided lectures via Adobe Connect to allow participants with fluctuating schedules to watch recordings of live lectures at their convenience online. Edmonds used Skype to facilitate better interaction between instructors and participants. Because of rapidly changing technology, some colleges, such as Shoreline, noted that colleges need to stay current in the field.

Sustainability

A goal of the TAACCCT grant program was sustainability of the grant activities after the grant ended. DOL encouraged grantees to use data collected about the effectiveness of the program and use those findings to integrate evidence-based practices at the college to maintain success and to develop plans for sustained employer involvement.

This section describes the challenges faced by colleges to sustain the activities they implemented during the grant. It then discusses colleges' plans for sustaining staffing, curricula, learning models, evidence-based practices, and partnerships after the grant ends.

Challenges to sustainability. Most project directors and staff reported that a lack of funding after the grant would be the biggest challenge to sustainability. Most colleges that planned to sustain most of their programs and services have another source of grant funding—either as recipients of a Round 4 grant or through another state or private funding source—although not necessarily in the same pathway or targeting the same population of students.

In addition, sustaining many of the staff hired specifically for local project (such as career navigators) would be difficult, according to college leadership and project directors. Staff who were not already employed by the college would be difficult to institutionalize after the end of grant funding. Full-time faculty members that served as instructors for grant-funded programs were easier to sustain than contract staff hired specifically for the project.

Finally, some of the project directors and staff mentioned that the economic recovery since the Great Recession (2007-2009) had played a role in their ability to successfully maintain needed enrollment levels in their grant-funded programs and thus sustain them after the end of the grant. Some staff commented that, if these programs ended due to low enrollment or student demand, it would be more challenging for colleges to restart and update a program to respond to the next economic recession.

Plans for sustaining core components of the local projects. Most colleges planned to sustain the core elements of their local projects such as academic course offerings, though the availability of alternate funding streams to sustain projects remains a concern. In general, project directors and staff most commonly reported that curricula—including the career pathways developed with grant funding—and equipment that would be used past the grant period were the most common elements of projects that would be sustained in the future.

In addition, core faculty member positions funded through the grant were expected to be sustained, but staff members hired and supported with grant funds were thought to be more difficult to sustain funding for after the closeout of the grant. Edmonds was addressing this challenge by having one staff member absorb multiple functions—such as career navigation for participants, along with advising—to consolidate the number of people that needed to be supported on the college’s budget and address the needs of participants by combining those functions within one person’s role.

Project directors and staff at many colleges expected to continue to offer their accelerated learning strategies that grant funding supported. However, some member colleges that implemented a similar teaching model during the grant would not be offering the same model after the grant ended. For example, Bossier Parish will no longer offer team teaching but would continue to offer integrated and contextualized learning.

Evidence-based practices, including career navigators, advisors, and cohort models, should continue to be sustained at many colleges, based on the perceptions of project directors and staff. For example, Roane State planned to continue working with their completion coach, Meridian and Turtle Mountain planned to keep their career navigator, Central Lakes planned to keep engaging their advisers and training representatives, and Laney planned to continue their cohort model. At some colleges, the cost of maintaining some of these staff members hired specifically for the local project presented an insurmountable barrier to continuing to offer that service in the future without new sustained funding.

4. Summary of Key Findings and Implications for Workforce Development

The TAACCCT grant program awarded \$1.9 billion in grants to institutions of higher education that offer programs of two years or less, mostly community colleges, to build their capacity to provide workforce education and training to adults in need of new skills for in-demand jobs. As highlighted in the conceptual framework, these efforts were also designed to address other key issues—changing systems to be better connected and integrated, more effectively addressing employer needs for skilled workers, and transforming how community colleges deliver education and training to adults. This report shares what was learned about how the Rounds 1 and 2 TAACCCT colleges implemented activities and identifies emerging ideas and approaches that can inform current and future workforce and community college initiatives and research.

This final chapter of the report summarizes key findings from the implementation study of the Rounds 1 and 2 grants, using data collected from the college survey and fieldwork to 17 Round 2 colleges. It also discusses implications for future workforce and community college initiatives. The chapter also highlights next steps for the national evaluation.

4.1. Key Findings

This section summarizes the key findings from the survey of over 600 community colleges that participated in the Rounds 1 and 2 grant activities and visits to 17 Round 2 colleges to provide an overall picture of the Rounds 1 and 2 grant implementation. Where notable, successes and challenges of the career pathways strategies that were implemented are highlighted.

Designing Grant Projects to Respond to Industry Needs

- In designing their local projects, colleges began by identifying the industries they would focus on for their grant activities—the top three being manufacturing; health care and social assistance; and professional, scientific, and technical services (primarily information technology). These industries were major employers in their areas so focusing on them could help ensure there would be available jobs for program graduates. Most colleges saw improving local and regional economic conditions over the course of the grant, which may have also helped the job prospects of graduates with needed skills and industry-recognized credentials.
- At the colleges visited, staff involved in the grant activities used labor market information on job growth to identify employers that were “economic drivers” in their local areas and regions.

Colleges also brought employers and industry to the table to ensure their program designs, curricula, credentials, and training equipment and facilities would help develop the skills employers needed.

Recruiting Adult Learners for TAACCCT Programs of Study

- Programs of study and other activities funded by the grants reached many individuals in need of new, industry-relevant skills. The colleges served an average of 398 participants during their grants. An average of 382 participants per college earned credit and an average of 199 had earned a credential of any type. An average of 133 participants retained in their program of study or other grant-funded program; and an average of 38 enrolled in further education and training after program completion. Colleges targeted TAA-eligible workers, a group that many colleges had not targeted previously, but were challenged to identify and recruit significant numbers of them by the time grant projects began recruiting participants.
- Over three-quarters of the colleges also targeted unemployed and underemployed workers (a particular focus of the colleges visited), veterans, low-income individuals, and adults with low education levels; all were groups that colleges had not targeted as often before implementing projects.
- Colleges reached potential participants most often through recruitment materials (e.g., flyers and advertisements), referrals from the public workforce system (a resource highly used by the colleges visited), and from employers and industries sending their employees. Challenges to recruitment, although not widely experienced by colleges, included individuals not meeting enrollment requirements, conflicts with work demands, and an improving economy. This may have hindered some grantees from meeting their original enrollment goals.

Using Evidence-Based Designs for Serving Adult Learners

- The range of designs and strategies used by grantees and member colleges reflects both the impetus of the grant announcements as well as the instructional, assessment, and support service models that were gaining attention in the workforce development field nationwide. Many of these models have shown promise for positive impacts on participant outcomes based on preliminary studies, but few have been evaluated to show strong empirical evidence to support wider use. Thus, the grants presented a valuable opportunity to test these approaches in a variety of settings where they had potential to be evaluated using rigorous methods.
- Rounds 1 and 2 colleges implemented strategies to help participants accelerate their progress through and completion of grant-funded programs. Colleges most often used stacked and latticed credentials, hybrid learning, and industry-recognized credentials designs as a part of their programming. However, the colleges tested numerous other strategies to support accelerated learning including prior learning assessments.
- Work-based learning was also a key instructional component for many Rounds 1 and 2 colleges. Nearly half of the colleges included internships as a part of their local projects. Twenty percent used clinical placements, reflecting a focus on the health care industry and related occupations for education and training programs. Some colleges also used job shadowing, which helped participants learn more about workplace culture and employer expectations for specific jobs. More intensive work-based learning models that have stronger evidence of effectiveness such as on-the-job training, work-study programs, and apprenticeships were less frequently used by colleges than other work-based learning opportunities.

- Most colleges developed and provided remediation services and other supports. Career coaching or counseling was by far the most common of these supports, occurring at 70 percent of colleges. Nearly all colleges visited also included career navigators as a key component of their project designs; this was a service that was valued by the participants. Additional common programmatic components included enhanced academic supports, including personalized instruction and tutoring and contextualized learning. Assistance with obtaining student financial aid was also a key component of the local projects and was important for many participants, as tuition was not covered by grant funds. Access to personal supports through colleges and partner organizations for needs such as child care, transportation, and counseling was made available by some colleges or their partner organizations.
- Colleges packaged multiple evidence-based components into their grant-funded programs of study. For example, among the 17 colleges visited, five of the projects used I-BEST models, an approach that combines team teaching, student supports, and industry alignment and is designed to serve individuals with low education levels or basic skills. One of the colleges leading a single-state consortium brought together career pathways, common curricula, competency-based learning, industry alignment, and accelerated, online developmental education based on a model created for the manufacturing industry for all member colleges.

Creating Career Pathways and Stacked and Latticed Credentials

- Creating career pathways programs became a core part of the TAACCCT grant program for the Round 2 grant announcement, but many of the colleges across both Rounds 1 and Round 2 built out part or all of a career pathway as part of their grant activities. Nearly half of the colleges reported developing new career pathways programs at their institutions. All Round 2 colleges visited designed and implemented programs that created initial steps on a career pathway, with educational certificates and professional certifications awarded. However, not all colleges implemented career pathways as a part of their activities, although they may have incorporated some components of the model.
- A common activity of the colleges was developing stacked and latticed credentials, a key element of the career pathways model. For many of the colleges visited, noncredit certificates were a first step on a pathway. Typically, there were multiple certificates and certifications awarded (e.g., logistics certificate and CDL license) as a part of the career pathways programs. In addition, close to half of the colleges surveyed reported developing articulation agreements between the grant-funded programs of study to more advanced programs within their institution and to programs at four-year institutions.
- Another key component of building career pathways programs was the involvement of employers and industry representatives in developing curriculum and credentials to ensure pathways reflected occupational requirements. Nearly half of the colleges reported developing industry-recognized credentials, informed by employer and industry needs. All of the colleges visited partnered with employers who assisted with curriculum design and the creation of industry-recognized credentials.

Building Online and Technology-Enabled Learning Capabilities

- The grants funded technology that allowed colleges to align programs of study with current occupational requirements in ways that would not have been possible otherwise. Most colleges used technology to create innovative learning environments for their participants. Hybrid learning, where courses blend in-person and online learning environments, was used by over 60 percent of the colleges surveyed. One of the colleges visited overcame two major challenges its

participants were experiencing—living in a rural area far from campus and working while attending school—through an online delivery model that allowed participants to talk directly with instructors online. It was coupled with self-paced learning to fit classes in between work and family schedules. Some of the colleges visited also purchased laptops for their participants' use during enrollment, making participation in the online components of the programs more feasible.

- Simulations of work settings, especially for manufacturing and health care training programs, were also common enhancements to the technology-enabled learning environments among Rounds 1 and 2 colleges. Building these simulation facilities was a major grant expenditure. Many project directors and staff interviewed saw the availability of grant funding to purchase equipment and facilities for simulation training as an essential component of project success. Some also noted that having the grant gave them an opportunity to approach employers to support their programs of study as they could present the grant activities as a benefit to employers. Some employers donated equipment to ensure that facilities provided state-of-the-art and industry-relevant instruction.

Aligning Systems through Partnerships Within and Outside of TAACCCT Colleges

- Colleges had to work with many stakeholders within and outside their institutions in order to make programs of study relevant to industry requirements while enabling working adults and those with families to participate and succeed in college. Internal stakeholders included college administrators, faculty, and staff, and external stakeholders included employers, industry representatives, the public workforce system, and community-based organizations. Additionally, colleges that were part of a consortium of colleges as a part of the grant had to obtain consensus across member colleges on key elements of the models they implemented, common curriculum to be used across their programs, and institutional policy and practice changes needed to successfully implement programs and other activities.
- Colleges developed internal partnerships to support newly developed or enhanced courses and instructional design and to help participants enroll in and complete their programs. These were mostly existing partnerships that colleges enhanced during the grant. Projects brought on current faculty and staff to help implement new curricula or train participants on new equipment and technology. A few of the colleges visited planned to use institutional funding to create permanent positions to sustain grant-funded programs after the grant ended. The project directors and staff also reported working with internal partners to support participants, including academic and financial support, access to personal support services, college and career counseling, and articulation from noncredit to credit-bearing programs.
- Nearly three-quarters of all colleges involved employers, industry associations, and chambers of commerce in the local grant projects in some way. As discussed, employer and industry involvement was needed to ensure programs of study were aligned with industry needs. Several colleges had highly engaged employers who provided input into curriculum and development of credentials, provided training equipment, recruited and screened employees for program participation, and hired program graduates. However, in a few cases, there were employers that were supposed to be involved in the grant activities and submitted letters of commitment with grant applications, but the full partnership did not materialize due to shifts in project design or other issues arising during implementation. Another issue was that project directors were not sure that employer partnerships could be sustained after the end of the grant, potentially making it difficult to adapt and align programs as industry standards shift.
- Another major type of partnership developed by the colleges was with the public workforce system. Local workforce development boards and American Job Centers served as important

referral resource, provided career counseling and assessment services, identified funding for training stipends, and provided job search assistance. All but one of the 17 colleges visited worked with their local public workforce system. At one college, the project director position would be funded by the American Job Center after the end of the grant. However, project directors at most colleges believed their relationships with the workforce system would fade once the grant ended.

4.2. Implications for Community College and Workforce Initiatives

The findings from implementation study of the Rounds 1 and 2 colleges, as summarized above, can help inform future community college and workforce initiatives to improve opportunities for adult learners to succeed in education and the workforce and to increase the pipeline of skilled workers for industries with high-demand occupations. The successes, challenges, and lessons from the grant activities provide policymakers, community college and workforce practitioners, and others with a better understanding of the promising career pathways strategies to support future replication and scaling. The main implications from the Rounds 1 and 2 colleges for future initiatives are:

- **Community colleges can “package” multiple strategies to address the needs of adult learners and employers in a particular industry.** While career pathways serves as an overarching framework the TAACCCT grants, colleges can use multiple strategies can be packaged in different ways to serve a particular group of adult learners or industry. For example, one approach is the use of a virtual learning platform for incumbent workers or rural students that bring together curriculum redesign and online and self-paced learning, with academic supports to ensure participant success. Other approaches might include a set of statewide or multicollge strategies that focuses on creating a core curriculum as the first step on a career pathway for an industry with coordinated policies such as prior learning assessments and transfer and articulation to support accelerated learning and advancement along a career pathway.
- **Building relationships with employers and the public workforce system are important to ensuring connections to employment are strong for adult learners.** Staff at Rounds 1 and 2 colleges spent time and resources on building relationships with employers, mainly with success in engaging them beyond an advisory role such as providing work-based learning opportunities, serving as instructors, and providing equipment for training. In some cases, colleges worked closely with employers to offer incumbent worker training. These types of engagement help ensure education and training teaches the skills that adult learners need to find or advance in a job. Efforts to partner with the public workforce system could be more challenging, especially if the public workforce system organizations did not provide referrals and other resources as expected. However, some colleges worked more closely with American Job Centers, which could provide participants with tuition assistance, career counseling, job search assistance, and interview and resume preparation.
- **Many changes to community colleges systems can be institutionalized within and across colleges to ensure sustainability of the grant activities.** An issue that emerged was the sustainability of career pathways once the grant funding ended, a key concern for policymakers and practitioners. Curricula and new instructional tools such as online learning platforms are

often sustainable components of the grants and can be shared and replicated widely. Policy changes such as credit for prior learning and transfer and articulation agreements can also last beyond the end of the grant. But there are potential challenges that can hinder sustainability. While the grants funded state-of-the-art equipment and facilities improvements, these assets could soon become out-of-date due to new technologies and colleges may need to find new resources to update them. Finding resources to continue funding for positions for new support staff such as career navigators can also be a challenge. In addition, the sustainability of employer partnerships can also be a challenge as economic conditions for different industries change. Developing sustainability plans early in a grant can help support successful continuation of the strategies that were most successful.

Other publications from the national evaluation also present implications of the TAACCCT grants for future community college and workforce initiatives.⁷⁴ The national evaluation will continue to examine the career pathways strategies implemented by the TAACCCT colleges and identify new approaches emerging from later grants with publications as follows:

- A series of briefs on the TAACCCT grant program
- A report on the perspectives of 41 employers who were identified as having strong relationships with Round 4 colleges;
- The Round 3 implementation study report, which provides new findings based on college survey of 187 colleges and visits to 14 colleges;
- The college survey report, which describes the grant activities from 263 Round 4 colleges;
- Reports for Rounds 1 and 2, Round 3, and Round 4 that synthesize the third-party evaluation implementation and impact findings, which will document how colleges implemented their grant activities and examine the successes and challenges of implementing the strategies they used and identify where there is rigorous evidence that such strategies had positive impacts on participants' education and employment outcomes;⁷⁵
- A report using survey data and administrative records for nine grantees to describe the characteristics of the Round 4 participants, their service receipt, and their education and employment outcomes and using site visit data to better understand the strategies these grantees implemented; and
- A series of briefs focused on Round 4 grants that summarize findings about career pathways, systems change, and employer perspectives on strong relationships with community colleges.

⁷⁴ All publications from the TAACCCT national evaluation are available on DOL's Chief Evaluation Office website, found at <https://www.dol.gov/agencies/oasp/evaluation/completedstudies>.

⁷⁵ DOL released the Rounds 1 and 2 synthesis report and the Round 3 implementation and synthesis reports at the same time as this report. See <https://www.dol.gov/agencies/oasp/evaluation/completedstudies> to access this report.

Appendices

Appendix A. Workforce Innovation and Opportunity Act of 2014 Definition of Career Pathways

The full Workforce Innovation and Opportunity Act definition of *career pathways* is “a combination of rigorous and high-quality education, training, and other services that—

- (A) aligns with the skill needs of industries in the economy of the State or regional economy involved;
- (B) prepares an individual to be successful in any of a full range of secondary or postsecondary education options;
- (C) includes counseling to support an individual in achieving the individual’s education and career goals;
- (D) includes, as appropriate, education offered concurrently with and in the same context as workforce preparation activities and training for a specific occupation or occupational cluster;
- (E) organizes education, training, and other services to meet the particular needs of an individual in a manner that accelerates the educational and career advancement of the individual to the extent practicable;
- (F) enables an individual to attain a secondary school diploma or its recognized equivalent, and at least 1 recognized postsecondary credential; and
- (G) helps an individual enter or advance within a specific occupation or occupational cluster” (29 U.S. Code § 3102 Definitions).

Appendix B. Side-by-Side Comparison of TAACCCT Grant Requirements and Features by Round

APPENDIX TABLE B.1

Side-by-Side Comparison of TAACCCT Grant Requirements and Features, by Round

Grant Requirements and Features	Round 1	Round 2	Round 3	Round 4
Number of grants	49	79	57	71
Period of performance	October 2011 –September 2014 (originally 36 months; extended by 6 months for 12 grants and by 12 months for 37 grants)	October 2012 –September 2016 (final six months of grant period used for reporting and evaluation activities only)	October 2013 –September 2017 (final six months of grant period used for reporting and evaluation activities only)	October 2014 –September 2018 (final six months of grant period used for reporting and evaluation activities only)
Total funding	\$500 million	\$500 million	\$475 million	\$451 million
Funding cap: single institution	\$5 million	\$3 million	\$2.75 million	\$2.5 million
Funding Cap: Consortium	\$20 million	\$15 million	\$25 million	3 to 10 members: \$10 million 11 or more members: \$20 million
Exceptions to funding cap	Yes, if the grant project would replicate evidenced-based strategies or implement online or technology-enabled learning	No	No	Yes, for projects focused on regional or statewide capacity building activities, including career pathway systems, statewide data integration, or nationally recognized competencies and credentials
Third-party evaluation	Not required, but evaluation of grant projects was encouraged	Required; grantees had to submit short evaluation design plan with application	Required; grantees had to submit short evaluation plan with application and detailed evaluation plan later; plans were subject to DOL approval	Required; grantees had to submit short evaluation plan with application and detailed evaluation plan later; plans were subject to DOL approval
Major strategy focus	Accelerated learning	Accelerated learning	Employer-sponsored, work-based training	Sector-based systems change

Grant Requirements and Features	Round 1	Round 2	Round 3	Round 4
Additional areas of focus, core elements, and priorities	<u>Evidence-based design</u> : use moderate or preliminary evidence to develop program designs and strategies	<u>Evidence-based design</u> : use existing or preliminary data to develop new strategies or use strong or moderate evidence to support replication of existing evidence-based strategies	<u>Evidence-based design</u> : use existing or preliminary data to develop new strategies or use strong or moderate evidence to support replication of existing evidence-based strategies	<u>Evidence-based design</u> : use existing or preliminary data to develop new strategies or use strong or moderate evidence to support replication of existing evidence-based strategies
	<u>Strategies for low-skilled and other workers</u> : redesigned developmental education; contextualized learning; augmented student services; enhanced relationships with community-based organizations to provide support services	<u>Stacked and latticed credentials</u> : interoperable programs; course clusters for credentials; stackable certifications, certificates, and diplomas; competency-based assessments; entrepreneurship; outcomes-based approaches	<u>Stacked and latticed credentials</u> : course clusters for credentials; stackable certifications, certificates, and diplomas; competency-based assessments; certificates designed in collaboration with industry associations or employers; latticed, side-by-side credentialing; prior learning credits; simulations	<u>Stacked and latticed credentials</u> : course clusters for credentials; stackable certifications, certificates, and diplomas; competency-based assessments; certificates designed in collaboration with industry associations or employers; latticed, side-by-side credentialing; prior learning credits; simulations
	<u>Programs that meet industry needs, including career pathways</u> : earn and learn education models; on-the-job training; clinical or cooperative education; paid internships; registered apprenticeships; partnerships with employers; entrepreneurship training, including mentoring and peer-to-peer training	<u>Transferability and articulation of credit</u> : increased cooperation among institutions on postsecondary career and technical education, pre-apprenticeship, and apprenticeship programs; credit transferability and articulation	<u>Transferability and articulation of credit</u> : increased cooperation among institutions within a state or across state lines on postsecondary career technical education, pre-apprenticeship, and apprenticeship program; credit transferability and articulation; bridge programs from noncredit to credit-bearing courses	<u>Career pathways</u> : sequenced coursework and/or training credentials that align with industry-recognized skills/credentials; accelerated remediation; student support services and career guidance; PLAs; modularized curricula; stacked and latticed credentials; online and technology-based learning; competency-based education; credit transferability and articulation

Grant Requirements and Features	Round 1	Round 2	Round 3	Round 4
	<u>Strengthened online and technology-enabled learning</u> : fully accessible online courses; technology-enabled learning courses; interactive simulations; personalized instruction; elements of game design; asynchronous and real-time collaboration; competency-based assessments; feedback mechanisms	<u>Advanced online and technology-enabled learning</u> : online and hybrid learning strategies; access for underserved areas; scalability; hands-on learning; accelerated learning strategies; interactive simulations; personalized and virtual instruction; game design; asynchronous and real-time collaboration	<u>Advanced online and technology-enabled learning</u> : online and hybrid learning strategies; rolling and open enrollment processes; modularized content delivery; simulated assessments and training; accelerated course delivery strategies; interactive simulations; personalized and virtual instruction; game design; digital tutors; asynchronous and real-time collaboration; large-scale systemic educational mining and learning analytics; personal tutor educational software; next generation assessments; capstone projects	<u>Advanced Online and Technology-Enabled Learning</u> : online and hybrid learning strategies; rolling and open enrollment processes; modularized content delivery; simulated assessments and training; accelerated course delivery strategies; interactive simulations; personalized and virtual instruction; game design; digital tutors; asynchronous and real-time collaboration; feedback technologies; predictive analytics; feedback loops; visualization; A/B testing approaches; next generation assessments
	<u>Improved retention and achievement rates and reduced time to completion</u> : self-paced learning; block scheduling; modular curricula; articulation processes or agreements for matriculation to four-year institutions; learning communities; restructured course scheduling	<u>Strategic alignment</u> : programs aligned with: (i) at least one employer for each targeted industry; (ii) the public workforce system; and (iii) educational institutions and other organizations	<u>Strategic alignment</u> : programs aligned with: (i) governors' economic development and WIA-WP integrated state workforce plans; (ii) at least one employer per industry targeted per site location; (iii) public workforce system; and (iv) at least one of: philanthropic organizations, business-related and other nonprofit organizations, community-based organizations, or labor organizations	<u>Strategic alignment</u> : programs aligned with: (i) governors' economic development and WIA-WP integrated state workforce plans; (iii) public workforce system; and (iv) at least one of: philanthropic organizations, business-related and other nonprofit organizations, community-based organizations, or labor organizations
			<u>Alignment with previously-funded TAACCCT projects</u> : research TAACCCT Rounds 1 and/or Round 2 grants to decrease duplication and promote coordination; collaboration with state higher education associations and/or governing boards	<u>Alignment with previously-funded TAACCCT projects</u> : research and coordinate with previous TAACCCT grantees in Rounds 1–3 targeting same occupations or industries; incorporate existing open educational resources; collaboration with state higher education associations and/or governing boards

Grant Requirements and Features	Round 1	Round 2	Round 3	Round 4
			<u>Sector strategies</u> : use real-time labor market information and engage employer and industry partners	<u>Sector strategies and employer engagement</u> : use traditional and real-time labor market information to improve education; partner with at least two employers and one regional industry representative per industry targeted; registered apprenticeship sponsorships; cognitive task analysis
Outreach	Required to perform outreach to and gather information on all communities to be served by the project	Required to perform outreach to and gather information on at least one community to be served by the project	Required to reach out to Round 1 grantees to coordinate efforts and expand program reach, and perform outreach to philanthropic and nonprofit organizations to incorporate previously developed projects and tools	Required to perform outreach to and gather information on all communities to be served by the project, leverage existing support services in the area, and seek out and collaborate with other regional initiatives
Required partnerships	(i) At least one employer; (ii) public workforce system	(i) At least one employer for each targeted industry; (ii) public workforce system	(i) Governor; (ii) at least one employer for each targeted industry; (iii) public workforce system; (iv) philanthropic organization, business-related and other nonprofit organization, community-based organization, or labor organization	(i) Governor; (ii) at least one employer for each targeted industry; (iii) regional and/or national industry representatives; (iv) public workforce system; (v) philanthropic organization, business-related and other nonprofit organization, community-based organization, or labor organization
Prior learning assessment	Encouraged as part of improved retention and completion rates but not required	Required as part of stacked and latticed credentialing	Required as part of stacked and latticed credentialing	Required as part of career pathways
Sustainability	Use program data to determine successful strategies and activities; plan for securing nonfederal funding sources or funding commitments, or develop low-cost integration strategies into general operations during grant period	Use program data to determine effective strategies and activities; explain how to integrate effective practices into curriculum offerings; plan for securing nonfederal funding sources or funding commitments; maintain and sustain employer partnerships	Use program data to determine effective strategies and activities; explain how to integrate effective practices into curriculum offerings; maintain and sustain employer partnerships	Use program data to develop a strategy for institutionalization of activities

Appendix C. Data Collection Methods

This appendix provides detailed information on the data collection methods the national evaluation team used for the analysis completed in this implementation report. Data collection instruments are available upon request from the national evaluation team at TAACCCTeval@urban.org.

Survey of the TAACCCT Colleges

The data collected through the online survey of TAACCCT colleges is aimed at developing a comprehensive description of all grant-funded activities. Unlike the planned site visits to a small subset of colleges (see next section on structured fieldwork), the survey was fielded to all Rounds 1 and 2 colleges. The survey questions were designed to assess the extent to which the colleges implemented activities that met the three overarching goals set forth in the original grant announcements for the grants: 1) to increase attainment of certifications, certificates, diplomas, and other industry-recognized credentials to better prepare TAA-eligible workers and other adults for high-wage, high-skill employment or re-employment in growth industry sectors; 2) to introduce innovative and effective methods for curriculum development and delivery that address specific industry needs and lead to improved learning outcomes and retention rates for TAA-eligible workers and other adults; and 3) to demonstrate, for TAA-eligible workers in particular, improved employment outcomes as a result of the funded program. The topics included local and regional context, goals, program development activities, participant experience, partnerships, leveraged resources, accomplishments to date, and sustainability plans.

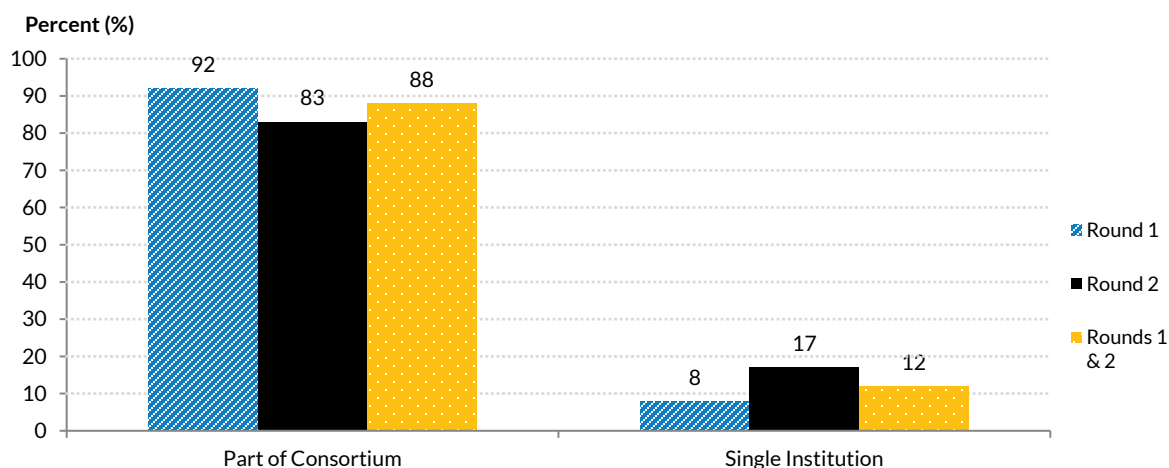
The team fielded the Round 1 survey from December 2015–February 2016 and the Round 2 survey from February 2016–April 2016. Round 1 grant activities had ended by the time the survey was fielded, and some TAACCCT college contacts were difficult to reach. Round 2 grants were still underway at the time of survey administration. Overall, across the two grant rounds, 590 from a universe of 663 completed the survey across 128 Rounds 1 and 2 grants. The team fielded the survey to 353 Round 1 colleges and received 293 responses. After closing the Round 1 survey, the team added 15 partially completed responses to the dataset in which respondents answered a significant portion of the survey questions but never formally submitted the survey. This resulted in a combined sample of 308 responses for an overall 87 percent response rate. The team then fielded the survey to 310 Round 2 colleges and received 306 responses (99 percent response rate).

Across the 128 Rounds 1 and 2 grants, 52 percent were consortia of two or more member colleges. As shown in figure C.1, over four-fifths (88 percent) of the 590 Rounds 1 and 2 colleges were part of

consortia. The proportion of colleges that were involved in a consortium decreased slightly from Round 1 to Round 2 (from 92 percent to 83 percent). (See appendix table E.1 for more detail.)

APPENDIX FIGURE C.1

Type of TAACCCT Grant Structure, TAACCCT Rounds 1 and 2 Responding Colleges



URBAN INSTITUTE

Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015-2016.

Note: N=590; 0 missing respondents.

Round 2 Grantee Selection for Site Visits

The 10 grantees, and 17 colleges participating in these grants, selected for fieldwork reflect the geographic diversity of the Round 2 grants across DOL regions, representing 15 states overall, as well as the diversity of awarded programs in terms of size, scale, and structure. They included single-institution grantees, single-state consortium grantees, and multistate consortium grantees, as shown in table C.1. The four-year grant awards ranged from \$2.5-3.0 million for single institutions to \$7.9-14.9 million for consortia. The 10 grantees provided programs of study offering career pathways in multiple high-demand industry sectors. The grantees and their member colleges worked closely with industry partners to design and develop curricula and create pipelines from training to work. Along with innovative instructional models, many grantees used career navigators or similar staff to support student retention, academic achievement, and employment. Appendix D provides brief descriptions of the 10 selected grantees and their grant-funded projects.

APPENDIX TABLE C.1

Overview of Round 2 Grantees Selected for Fieldwork

DOL region	Grantee	Structure		Number of colleges in consortium	Grant amount
		Single institution	Consortium		
1	Monroe Community College (NY)		Single-state	30	\$14,633,340
1	New England Institute of Technology (RI)	X		Not applicable	\$2,500,000
2	Northern Virginia Community College (VA)		Multistate	7	\$12,296,029
3	Roane State Community College (TN)		Single-state	13	\$14,618,772
4	Bismarck State College (ND)		Single-state	5	\$14,642,938
4	Bossier Parish Community College (LA)		Multistate	9	\$7,615,117
5	Vincennes University (IN)	X		Not applicable	\$2,931,354
5	Central Lakes College (MN)		Single-state	4	\$13,100,920
6	Los Medanos College/4CD (CA)		Single-state	11	\$14,990,417
6	Edmonds Community College (WA)	X		Not applicable	\$3,000,000

Source: Urban Institute TAACCCT grantee database, 2016.

Notes: The initials of the states for each grantee are provided in parentheses. DOL's Employment and Training Administration maintains six regional offices whose staff monitor programs, services, and benefits provided under the Workforce Innovation and Opportunity Act, Unemployment Insurance Program, the TAA Program, and other targeted grant investments. See https://www.doleta.gov/regions/eta_default.cfm for more information.

Per the Round 2 grant announcement guidelines, the lead institution identified in the grant application served as the official grantee of record, with the responsibility for financial and administrative oversight of the grant.⁷⁶ This was true regardless of whether the grantee was a single institution or a consortium of institutions. The following paragraphs summarize how the 10 Round 2 grants visited by the national evaluation team were structured (see appendix D for more detail on the sites).

Single institution. The site teams visited three single-institution grantees (NEIT, Vincennes, and Edmonds). These sites were solely responsible for carrying out all TAACCCT-funded activities offered

⁷⁶ Unless otherwise noted, the educational partners described in this section were not cograntees or member colleges of TAACCCT consortium grants.

at their colleges and for meeting the following additional grant requirements, which DOL required of all lead institutions: 1) serve as the point of contact with DOL throughout the grant period; 2) draw down grant funds through the Payment Management System; 3) submit all required deliverables to DOL; 4) request or agree to revisions of the grant agreements or statements of work; 5) act as a steward for all expenditures under the grant; and 6) be responsible for working with DOL to close out the grant. These grantees implemented projects to train participants in a variety of occupations at their respective institutions.

Single-state consortium. A single-state consortium structure was stipulated by DOL to be fiscally and administratively led by a single lead institution, which would implement its projects in partnership with member colleges within the state. The consortium agreements submitted with the grant applications governed the participation of consortium members. In addition to stipulating the duties of the lead institution in each state (see above), the agreements served as a funding mechanism by which each local project would receive grant monies, and it laid out partnership agreements that governed the terms of each member college's participation. Site teams visited five single-state consortium grantees as part of the Round 2 site visits, which included visits to five lead institutions (Monroe, Roane State, Bismarck State, Central Lakes, and Los Medanos/4CD), as well as one or two member colleges per grant. The size of the single-state consortia visited by site teams—in terms of the number of member colleges participating in the state—ranged widely, from 30 participating colleges in the grant led by Monroe in New York, to four participating colleges in the grant led by Bismarck State in North Dakota.⁷⁷

Multistate consortium. Multistate consortia were also fiscally and administratively overseen by lead institutions and governed by consortium agreements, but differed from single-state consortia because the member colleges—and therefore the local projects implemented by those member colleges—spanned more than one state. Site teams visited two multistate consortia (lead by Bossier Parish in Louisiana and NOVA in Virginia), as well as one member college each in a different state (Mississippi and Washington respectively). Like single-state consortia, the number of member colleges participating and the geographical location of each member college was established at the discretion of the lead applicant.

⁷⁷ Round 2 grantees could apply as single institutions or as lead institutions in a consortium grant if they were not awarded TAACCCT funds as Round 1 grantees. Grantees funded as single applicants or lead institutions in a consortium in Round 1 were only eligible to apply as a member institution in a consortium in Round 2.

Appendix D. Descriptions of 10 Round 2 TAACCCT Grantees Visited for the Implementation Study

The descriptions of the 10 Round 2 TAACCCT grantees were developed based on information from the grantees' grant applications and data collected during site visits to the grantees in spring 2016.

Monroe Community College (Monroe) is a two-year college of the State University of New York (SUNY) system, located in Monroe County, New York. The college has two campuses, one in the town of Brighton and another, the Damon City Campus, in the City of Rochester. It is one of 30 community colleges in the SUNY system. Monroe served as the lead entity for *SUNY TEAM (Training and Education in Advanced Manufacturing)*, a statewide consortium of 30 SUNY community colleges, and implemented a local project.

The New England Institute of Technology (NEIT) is a private, nonprofit technical college offering two-year, four-year, graduate, and online degrees in over 50 programs. Headquartered in East Greenwich, Rhode Island, it has three campuses, including a campus in Warwick, where the *Shipbuilding/Marine and Advanced Manufacturing Institute (SAMI)* TAACCCT program administrative and instructional facilities are located.

Northern Virginia Community College (NOVA) is one of 23 community colleges in Virginia, serving over 75,000 for-credit (and over 25,000 noncredit) students annually in the Northern Virginia area on six campuses. NOVA served as the grant administrator and lead entity for *Credentials to Careers (C2C)*, a multistate consortium focused on STEM education and employment. Five colleges in Virginia were part of the consortium, with Austin Community College District and Edmonds College also serving as consortium members. NOVA's local grant project activities focused on the IT sector.

Roane State Community College (Roane State) is one of 13 community colleges in the state of Tennessee. Located in Oak Ridge, it has nine locations across East Tennessee, including a center for health science education in West Knoxville. The college provides transfer and career preparation study options, as well as continuing education. Roane State was the lead entity for *A Prescription for Training Health Care Workers in Tennessee (Rx for Tennessee)*, a consortium of 13 community colleges and 27 technology centers that provided health care training to meet state-wide health care employers and industry needs. Four Tennessee College of Applied Technology campuses specifically implemented RxTN programs, but all 27 campuses in the state were involved in the TAACCCT program in some capacity.

Bismarck State College (Bismarck State) is the third largest college in the North Dakota University System. Known for its National Energy Center for Excellence, Bismarck State served as the lead entity for the *Training for Regional Energy in North Dakota (TREND)* consortium, which included three tribal

colleges and one state college, all focused on the statewide energy and construction sector. The TREND grant is administered through the National Energy Center Excellence, which is home to many nationally recognized energy industry degree and training programs.

Bossier Parish Community College (Bossier Parish), located in Bossier City, Louisiana (next to Shreveport), is a two-year institution of higher education and a member of the University of Louisiana System. The college led a consortium of nine colleges across Louisiana and Mississippi for the *Retraining the Gulf Coast Workforce through IT Pathways* project, which targeted the IT sector, with career pathways in cybersecurity, industrial IT, and health informatics.

Vincennes University (Vincennes), Indiana's first college, is the State's premier transfer institution and a leader in innovative career programming. It is a two-year college offering associate and baccalaureate programs in many fields. Vincennes implemented the *Logistics Training and Education Center (LTEC) Initiative* program, which developed and delivered industry-approved education and training to meet the demands of employers in the logistics industry.

Central Lakes College (Central Lakes) is a two-year community and technical college, with campuses in Brainerd and Staples, Minnesota. It is part of the Minnesota State Colleges and Universities system. Central Lakes served as the lead institution for the *Regional Advanced Manufacturing Re-Training* program, and created the *Advanced Manufacturing Education (AME) Alliance* in partnership with St. Cloud Technical and Community College, Pine Technical College, and the 360 Center for Advanced Manufacturing at Bemidji State University.

Los Medanos College/Contra Costa Community College District (Los Medanos/4CD), located in California, was the lead entity and grant administrator for the *Design-It, Build-It, Ship-It* program, a single-state consortium of 11 community colleges located in San Francisco's East Bay area, serving students in Alameda, Contra Costa, and Solano counties. A regional workforce initiative, the project targeted four industrial sectors—advanced manufacturing, transportation and logistics, engineering, and biotechnology—and developed training to prepare participants for high-demand jobs. Although Los Medanos served as the lead institution for grant application purposes, grant activities were managed by the Contra Costa Community College District (4CD) administrative offices.

Edmonds Community College (Edmonds) is a public community college located in Lynwood, Washington in Snohomish County, part of the greater Seattle metropolitan area. Since the 1990s, the college has received 20 National Science Foundation grants, the first of which provided scholarships to low-income students studying computer science, engineering, and math. Edmonds implemented the *Progressive, Accelerated Certifications for Employment in Information Technology (PACE-IT)* program, using self-paced, modularized e-learning, leading to certifications for entry-level and mid-career IT employment.

Appendix E. Detailed Tables from the Rounds 1 and 2 College Survey

APPENDIX TABLE E.1

Rounds 1 and 2 TAACCCT Colleges That Are Part of a Consortium Grant

Part of a Consortium?	Rounds 1 and 2		Round 1		Round 2	
	Total	Percent	Total	Percent	Total	Percent
Yes	518	87.8%	272	92.5%	246	83.1%
No	72	12.2%	22	7.5%	50	16.9%

Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–2016.

Notes: N=590; 0 missing respondents.

APPENDIX TABLE E.2

Types of Geographic Areas Served by Rounds 1 and 2 TAACCCT Colleges

Type of Geographic Area Served	Number	Percent
Single county	123	21%
Multiple counties (but not all counties in state)	325	55%
All counties within a state	105	18%
Multiple states	30	5%
Total	583	--

Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–2016.

Notes: N=583; 7 missing respondents.

APPENDIX TABLE E.3

Characterization of Geographic Areas Served by Rounds 1 and 2 TAACCCT Colleges

Type of Area Served	Number	Percent
Urban	238	41%
Suburban	228	39%
Rural	406	70%
Total	580	--

Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–2016.

Notes: N=580; 10 missing respondents.

APPENDIX TABLE E.4

Extent to Which Geographic Area Served Has Been Affected by Major Employer Plant Closings and Layoffs in the Five Years Prior to and the Years Since the Start of the Grant by Rounds 1 and 2

TAACCCT Colleges

Extent to Which Geographic Area Served Has Been Affected by Major Employer Plant Closings and Layoffs	In the Five Years Prior to Start of Grant		In the Year Since Start of Grant	
	Number	Percent	Number	Percent
Substantially Affected	160	28%	56	10%
Somewhat Affected	252	43%	243	42%
Hardly Affected	104	18%	224	39%
Don't Know/Unsure	65	11%	56	10%
Total	581	100%	288	100%

Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–2016.

Notes: N=590; 9 missing respondents in five years prior; 11 missing respondents for year since start of grant.

APPENDIX TABLE E.5

Top-Ranked Employment Sectors in TAACCCT Service Areas and Industry Sector Focus of TAACCCT Grant Across Rounds 1 and 2 TAACCCT Colleges

Industry sector	# of colleges ranking within the top 3	%
Accommodation and food services	101	17%
Administrative and support and waste management and remediation services	10	2%
Agriculture, fishing, and hunting	89	15%
Arts and recreation	4	1%
Construction	43	7%
Educational services	148	25%
Finance and insurance	25	4%
Health care and social assistance	392	66%
Information	42	7%
Management of companies and enterprises	18	3%
Manufacturing	312	53%
Mining, oil, and gas extraction	34	6%
Real estate and rental and leasing	3	1%
Retail trade	98	17%
Professional and technical services	98	17%
Public administration	56	9%
Transportation and warehousing	91	15%
Utilities	20	3%
Wholesale trade	5	1%
Other services (except public administration)	30	5%

Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–2016.

Notes: N=590; 0 missing respondents.

APPENDIX TABLE E.6

Occupations for Which TAACCCT-Funded Programs of Study Were Developed

Occupation	Rounds 1 and 2		Round 1		Round 2	
	Number of colleges	Percent	Number of colleges	Percent	Number of colleges	Percent
Accountants and auditors	15	3%	11	4%	4	1%
Aerospace engineering and operations technicians	22	4%	15	5%	7	2%
Agricultural and food science technicians	31	5%	23	8%	8	3%
Aides, home health	65	11%	50	17%	15	5%
Aircraft mechanics and service technicians	20	3%	12	4%	8	3%
Aircraft structure, surfaces, rigging, and systems assemblers	19	3%	11	4%	8	3%
Ambulance drivers and attendants, except emergency medical technicians	6	1%	5	2%	1	0%
Automotive service technicians and mechanics	34	6%	24	8%	10	3%
Cardiovascular technologists and technicians	10	2%	4	1%	6	2%
Carpenters	16	3%	12	4%	4	1%
Combined food preparation and serving workers, including fast food	13	2%	10	3%	3	1%
Community health workers	45	8%	34	12%	11	4%
Computer and information systems managers	64	11%	38	13%	26	9%
Computer programmers	46	8%	26	9%	20	7%
Computer systems analysts	48	8%	28	10%	20	7%
Computer-controlled machine tool Operators, metal and plastic	108	18%	38	13%	70	24%
Construction laborers	30	5%	18	6%	12	4%
Customer service representatives	25	4%	16	5%	9	3%
Dental assistants	14	2%	7	2%	7	2%
Diagnostic medical sonographers	7	1%	3	1%	4	1%
Drafters, includes computer-aided designers	56	9%	29	10%	27	9%
Electricians	71	12%	39	13%	32	11%
Electromechanical equipment assemblers	83	14%	37	13%	46	16%
Emergency medical technicians and paramedics	40	7%	27	9%	13	4%
Energy auditors	19	3%	15	5%	4	1%
Energy engineers	18	3%	11	4%	7	2%
Executive secretaries and executive administrative assistants	22	4%	16	5%	6	2%
Heating, air conditioning, and refrigeration mechanics and installers	44	7%	31	11%	13	4%
Industrial engineers	50	8%	17	6%	33	11%
Industrial machinery mechanics	164	28%	70	24%	94	32%

Occupation	Rounds 1 and 2		Round 1		Round 2	
	Number of colleges	Percent	Number of colleges	Percent	Number of colleges	Percent
Information security analysts	34	6%	25	9%	9	3%
Licensed practical and licensed vocational nurses	38	6%	31	11%	7	2%
Machinists	157	27%	56	19%	101	34%
Market research analysts and marketing specialists	7	1%	5	2%	2	1%
Massage therapists	8	1%	7	2%	1	0%
Materials scientists	5	1%	3	1%	2	1%
Medical assistants	85	14%	55	19%	30	10%
Medical records and health information technicians	83	14%	54	18%	29	10%
Meter readers, utilities	10	2%	2	1%	8	3%
Miscellaneous assemblers and fabricators	98	17%	35	12%	63	21%
Network administrators	40	7%	26	9%	14	5%
Nursing assistants	78	13%	58	20%	20	7%
Occupational therapy assistants	16	3%	8	3%	8	3%
Pharmacy technicians	33	6%	25	9%	8	3%
Phlebotomists	39	7%	20	7%	19	6%
Physical therapist assistants	19	3%	12	4%	7	2%
Radiologic technologists	26	4%	16	5%	10	3%
Registered nurses	67	11%	42	14%	25	8%
Respiratory therapists	13	2%	8	3%	5	2%
Software developers, applications	30	5%	14	5%	16	5%
Surgical technologists	13	2%	7	2%	6	2%
Web developers	31	5%	17	6%	14	5%
Welders, cutters, solderers, and brazers	171	29%	58	20%	113	38%
Workers, hazardous materials removal	13	2%	6	2%	7	2%
Other, not listed	239	41%	117	40%	122	41%

Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–2016.

Notes: N=590; 0 missing respondents.

APPENDIX TABLE E.7

Changes in Targeted Occupations' Employment Opportunities

Change in Employment Opportunities for Targeted Occupations	Number	Percent
Increased a lot	104	18%
Increased somewhat	239	42%
About the same	158	27%
Decreased somewhat	31	5%
Decreased a lot	12	2%
Don't know/unsure	31	5%

Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–2016.

Notes: N=590; 0 missing respondents.

APPENDIX TABLE E.8

Types of Credentials for Newly Developed and Enhanced and Expanded Existing Programs of Study Using Grant Funding

Type of Credential	Newly Developed Program		Enhanced/Expanded Programs	
	Number	Percent	Number	Percent
Certificates of completion for programs of less than one year duration	279	50%	250	45%
Professional/industry certifications	193	35%	168	30%
Certificates of completion for programs of one to two years' duration	147	26%	247	45%
Academic degrees	104	19%	213	38%
Occupational degrees	56	10%	131	24%
Licenses	32	6%	58	10%
Other credentials	13	2%	14	3%

Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–2016.

Notes: N=555; 35 missing respondents.

APPENDIX TABLE E.9

Leveraging Existing Support Services for TAACCCT Participants

Support Service	Rounds 1 and 2				Round 1				Round 2			
	At your institution	Percent	From a partner	Percent	At your institution	Percent	From a partner	Percent	At your institution	Percent	From a partner	Percent
Child care assistance	112	20%	111	20%	56	20%	63	22%	56	20%	48	17%
Coordination with public assistance	136	24%	205	37%	67	24%	113	40%	69	25%	92	33%
Emergency assistance (e.g., rental or utility assistance)	109	19%	152	27%	50	18%	84	30%	59	21%	68	24%
Pell grants	424	76%	14	3%	217	77%	10	4%	207	74%	4	1%
Other financial aid	408	73%	88	16%	208	74%	45	16%	200	72%	43	15%
Financial counseling	306	55%	74	13%	162	57%	42	15%	144	52%	32	12%
Case management or proactive advising	413	74%	88	16%	219	78%	43	15%	194	70%	45	16%
Peer support groups	171	31%	24	4%	98	35%	12	4%	73	26%	12	4%
Personal/family counseling	129	23%	107	19%	58	21%	64	23%	71	26%	43	15%
Transportation assistance	121	22%	166	30%	52	18%	96	34%	69	25%	70	25%
None	26	5%	20	4%	5	2%	6	2%	21	8%	14	5%
Other	13	2%	7	1%	5	2%	3	1%	8	3%	4	1%

Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–2016.

Notes: N=560; 30 missing respondents.

APPENDIX TABLE E.10

Career and Employment Services by Type of Service

Type of Career and Employment Service	Rounds 1 and 2				Round 1				Round 2			
	At your institution	Percent	From a partner	Percent	At your institution	Percent	From a partner	Percent	At your institution	Percent	From a partner	Percent
Employment/career counseling	513	90%	207	36%	252	88%	98	34%	261	92%	109	38%
Interviewing skills/résumé workshops	537	94%	194	34%	269	94%	86	30%	268	94%	108	38%
Job readiness/soft skills training	502	88%	165	29%	255	89%	78	27%	247	87%	87	31%
Job search assistance	493	86%	213	37%	237	83%	111	39%	256	90%	102	36%
Referrals to job openings	509	89%	216	38%	249	87%	113	40%	260	92%	103	36%
None	4	1%	1	0%	1	0%	0	0%	3	1%	1	0%
Other	6	1%	2	0%	1	0%	0	0%	5	2%	2	1%

Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–2016.

Notes: N=570; 20 missing respondents.

APPENDIX TABLE E.12

TAACCCT College Eligibility Requirements for Non-TAA Participants

Types of Enrollment Requirements	# Colleges with Requirement	Percent
High school diploma or GED	439	78%
College entrance exam (such as SAT, ACT, COMPASS)	294	52%
Basic skills (such as TABE, CASAS, BEST)	203	36%
Interview	165	29%
Aptitude test	101	18%
Background check	77	14%
Drug test	58	10%
Other	80	14%

Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–2016.

Notes: N=562; 28 missing respondents.

APPENDIX TABLE E.13

Views on Efficacy of Recruitment Strategies Used by Rounds 1 and 2 TAACCCT Colleges

Type of Recruitment Strategy	N	# Colleges Rating Strategy Effective	Percent	Average Rating
Partnerships with employers and industry associations	479	334	70%	1.24
In-person presentations in the community (e.g., at schools, neighborhood centers, libraries)	471	295	63%	1.37
Referrals from the workforce system	485	255	53%	1.32
Door-to-door outreach	506	174	34%	1.56
Media outreach campaigns (e.g., TV, radio, newspapers, professionally prepared ads on buses/bus shelters)	417	154	37%	1.51
Referrals from community- or faith-based organizations	328	137	42%	1.48
Informational websites	277	113	41%	1.44
Toll-free information hotlines	204	25	12%	1.49
Distribution of flyers, posters, or other self-produced educational/informational materials	37	17	46%	1.24
Direct mail campaigns	26	9	35%	1.63
Other (please specify)	84	66	79%	1.13

Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–2016.

Notes: N=577; 13 missing respondents.

APPENDIX TABLE E.14

Potential Problems or Barriers That May Affect Enrollment and/or Recruitment and the Severity of the Challenge

Type of Recruitment Challenge	N	Average	A great challenge/problem	Somewhat of a challenge/problem	A minor challenge/problem	Not a challenge/problem at all	Not applicable
Conflict between work and school hours	585	2.29	101	249	151	55	29
Difficulties with identifying and finding eligible participants	582	2.49	109	191	142	121	19
Child care	582	2.52	78	187	174	86	57
Low or inadequate basic skill levels of applicants	580	2.53	86	186	189	95	24
Participants' lack of access to reliable transportation	581	2.62	86	145	203	109	38
Tuition cost	581	2.71	77	145	170	143	46
Changing economic and labor market conditions that don't align with programs of study offered	580	2.76	65	172	121	173	49
Insufficient referrals from partner community-based organizations	582	2.79	54	138	187	136	67
Insufficient referrals from partner(s) in the workforce system	581	2.83	75	131	156	186	33
Negative perceptions of or a lack of interest in occupations by potential participants	580	2.87	62	133	156	185	44
Insufficient referrals from partner employers or employer organizations	581	2.93	41	144	161	187	48
Insufficient resources devoted to outreach and recruitment	584	2.97	66	104	169	217	28
Lack of effectiveness of selected outreach strategies	580	3.12	28	102	198	223	29
Other (please specify)	72	1.69	21	8	4	3	36

Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–2016.

APPENDIX TABLE E.15

Results to Date on Key Outcome Measures for TAACCCT Participants, Overall and Averages per College and by Grant Type

Outcome Goals	Total (Rounds 1 and 2)		Single Institution (Rounds 1 and 2)		Consortium Member (Rounds 1 and 2)	
	# of TAACCCT participants	Average # of TAACCCT participants	# of TAACCCT participants	Average # of TAACCCT participants	# of TAACCCT participants	Average # of TAACCCT participants
Total unique TAACCCT participants served/enrolled	190,258	398	30,501	484	159,757	385
Total number of participants who have completed a TAACCCT-funded program	76,329	165	10,770	174	65,559	163
Total number of participants still retained in their program of study or another TAACCCT-funded program	55,668	133	13,224	224	42,444	118
Total number of participants completing credit hours	165,756	382	23,295	382	142,461	382
Total number of participants earning credentials	77,908	177	12,015	194	65,893	175
Total number of participants enrolled in further education after grant-funded program of study completion	14,516	38	2,488	42	12,028	38
Total number of participants employed after grant-funded program of study completion	28,873	74	3,272	56	25,601	77
Total number of participants retained in employment after program of study completion	18,833	52	2,195	39	16,638	54
Total number of those participants employed at enrollment (for purposes of this reporting, "incumbent workers") who receive a wage increase after enrollment	18,589	55	1,923	36	16,666	58

Source: Urban Institute Survey of TAACCCT Rounds 1 and 2 Grants, 2015–2016.

APPENDIX TABLE E.16

Results to Date on Key Outcome Measures for TAACCCT Participants, Overall and Averages Per College by Round

Outcome Goals	Round 1		Round 2	
	# of Participants	Average # of Participants	# of Participants	Average # of Participants
Total unique TAACCCT participants served/enrolled	87,155	417	103,103	395
Total number of participants who have completed a TAACCCT-funded program	39,233	198	37,096	145
Total number of participants still retained in their program of study or another TAACCCT-funded program	16,297	123	39,371	173
Total number of participants completing credit hours	76,895	434	88,861	373
Total number of participants earning credentials	36,899	196	41,009	169
Total number of participants enrolled in further education after grant-funded program of study completion	5,542	43	8,974	47
Total number of participants employed after grant-funded program of study completion	17,001	102	11,872	63
Total number of participants retained in employment after program of study completion	10,046	72	8,787	52
Total number of those participants employed at enrollment (for purposes of this reporting, "incumbent workers") who receive a wage increase post-enrollment.	5,031	48	13,558	86

Source: Urban Institute Survey of TAACCCT Rounds 1 and 2 Grants, 2015–2016.

APPENDIX TABLE E.17

Types of Within-College Departments or Offices with Which TAACCCT Colleges Expanded Current or Developed New Partnerships

College Departments or Offices with Which TAACCCT Colleges Have Partnered	Number	Percent
Other workforce/career and technical education departments	394	67%
Financial aid	384	65%
College administration	383	65%
Career services	327	55%
Other academic departments	324	55%
Student support services	302	51%
Information technology/computer services	287	49%
Tutoring/academic support centers	233	39%
Adult education/remedial education services	214	36%
Other (specify)	20	3%

Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–2016.

Notes: N=590, 0 missing respondents.

APPENDIX TABLE E.18

Status of Partnerships with Other College Departments or Offices under TAACCCT

College Departments or Offices with Which TAACCCT Colleges Have Partnered	N	Expanded Current Partnership	Developed New Partnership	Partnership Unchanged	No Partnerships
Student support services	543	61%	10%	27%	2%
Career services	550	58%	14%	26%	3%
Other workforce/career and technical education departments	535	57%	15%	24%	4%
College administration	534	51%	6%	41%	3%
Adult education/remedial education services	535	50%	11%	33%	6%
Tutoring/academic support centers	540	47%	13%	37%	3%
Other academic departments	518	43%	13%	40%	4%
Information technology/computer services	526	37%	7%	50%	5%
Financial aid	531	36%	5%	53%	7%
Other (specify)	49	20%	20%	20%	39%

Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–2016.

APPENDIX TABLE E.19

Status of Rounds 1 and 2 TAACCCT Colleges' Partnerships with External Organizations

External Organization Partner	N	Enhanced Current Partnership	Developed New Partnership	Partnership Unchanged	No Partnership
Local workforce investment boards/ American Job Centers	546	57%	8%	29%	6%
Industry associations, employers, or chambers of commerce	546	54%	24%	18%	3%
Career or job centers (other than American Job Centers)	537	47%	13%	26%	14%
School districts (K-12)	527	43%	9%	34%	13%
Community-based organizations or other social services agencies	536	42%	15%	35%	8%
Economic development organizations	532	42%	9%	38%	11%
State workforce investment boards	527	40%	5%	40%	15%
Universities or other four-year institutions	527	36%	8%	41%	16%
State government agencies	528	30%	5%	45%	20%
Local government	527	30%	5%	49%	15%
Community or technical colleges other than those in your consortium (if applicable)	527	28%	17%	27%	28%
Philanthropic community	523	23%	4%	45%	27%
Vocational or trade schools	519	21%	5%	42%	31%
Faith-based organizations	522	12%	4%	38%	45%
Unions	522	9%	3%	34%	54%
Seed and venture capital organizations or individuals, investor networks, or entrepreneurs	512	6%	3%	33%	59%
Other (please specify):	41	7%	10%	20%	63%

Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–2016.

APPENDIX TABLE E.20

Plans by Rounds 1 and 2 TAACCCT Colleges to Continue Services Developed Specifically for the TAACCCT Grant after the Grant Ends

Type of Service	N	Definitely Will Continue	Likely to Continue	Unsure	Not Likely to Continue	Definitely Will Not Continue
College administration	206	69%	19%	9%	1%	1%
Student support services	317	66%	24%	8%	1%	1%
Career services	387	66%	23%	7%	2%	2%
Other workforce/career and technical education departments	26	65%	19%	12%	4%	0%
Information technology/computer services	375	65%	25%	7%	2%	1%
Other	296	64%	22%	11%	1%	2%
Other academic departments	86	63%	26%	7%	0%	5%
Adult education/remedial education services	322	59%	29%	9%	2%	2%
Financial aid	228	57%	32%	8%	1%	1%
Tutoring/academic support centers	270	56%	26%	16%	1%	1%

Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–2016.

APPENDIX TABLE E.21

Intensity Level of Continuation of TAACCCT-Funded Programs by Rounds 1 and 2 TAACCCT Colleges after Grant Ends

Type of Services	N	Greater Intensity	Same Intensity	Reduced Intensity
Career services	253	35%	57%	8%
Adult education/remedial education services	190	33%	61%	6%
Other academic departments	53	32%	66%	2%
Student support services	207	31%	62%	6%
Information technology / computer services	242	26%	64%	10%
Tutoring / academic support centers	149	17%	78%	5%
Financial aid	129	16%	76%	8%
College administration	143	13%	85%	2%
Other (please specify):	189	9%	82%	9%
Other workforce / career and technical education departments	6	50%	50%	0%

Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–2016.

APPENDIX TABLE E.22

Degrees of Self-Reported Success in Working with Partners

Activity	N	Mean	1 - Not at All successful	2 - A Little Successful	3 - Somewhat Successful	4 - Very Successful	5 - Too Soon to Tell	6 - Not Applicable
Accessing planned, leveraged resources	554	3.85	2%	13%	24%	40%	4%	18%
Working with partners while making program changes	555	3.77	1%	7%	19%	66%	1%	6%
Communicating with partners	557	3.74	0%	8%	14%	75%	1%	2%
Engaging partners throughout the grant period	556	3.64	1%	9%	20%	68%	1%	2%
Other	37	4.92	11%	0%	0%	24%	5%	59%

Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–2016.

APPENDIX TABLE E.23

Degrees to Which Rounds 1 and 2 College Respondents Believed They Had Strengthened and Supported Partnerships with Various Organizations

Partner Type	N	Mean	1 - Not at All Successful	2 - A Little Successful	3 - Somewhat Successful	4 - Very Successful	5 - Too Soon to Tell	6 - Not Applicable
Public workforce system	552	3.79	3%	13%	24%	41%	2%	17%
Other training providers (community-based organizations, trade schools, etc.)	553	3.78	4%	16%	27%	27%	4%	22%
Employers or industry associations	556	3.73	1%	8%	15%	72%	1%	3%
Institutions of higher education (four-year colleges and universities, community and technical colleges)	556	3.67	2%	12%	31%	40%	2%	12%
Secondary schools (high schools)	555	3.53	4%	11%	27%	51%	2%	5%
Other	29	5.21	7%	0%	0%	21%	3%	69%

Source: Urban Institute survey of TAACCCT Rounds 1 and 2 colleges, 2015–2016.

APPENDIX TABLE E.24

Types of Partner Organizations Engaged by Local TAACCCT Colleges

	Type of Partner								
	Employer	Business, trade, or industry organization	Economic development organization	Workforce development board	American Job Center	Public social services agency	Education provider	Community- or faith-Based organization	Technical assistance provider
TAACCCT College									
Monroe Community College	✓	✓		✓	✓		✓		
Cayuga Community College	✓	✓	✓	✓	✓		✓		
New England Institute of Technology	✓	✓	✓	✓	✓			✓	
Northern Virginia Community College	✓			✓	✓		✓	✓	✓
Shoreline Technical and Community College	✓	✓		✓			✓	✓	✓
Roane State Community College	✓	✓		✓	✓		✓		
Northeast State Community College	✓	✓		✓	✓		✓		
Bismarck State College	✓	✓			✓	✓			
Turtle Mountain Community College	✓				✓	✓	✓		
Bossier Parish Community College	✓				✓		✓	✓	✓
Meridian Community College	✓			✓	✓	✓	✓		✓
Vincennes University	✓	✓	✓	✓	✓			✓	
Central Lakes College	✓	✓		✓	✓		✓	✓	
St. Cloud Community and Technical College	✓	✓		✓	✓		✓	✓	
Laney College	✓	✓	✓	✓	✓		✓	✓	
Contra Costa Community College	✓	✓	✓	✓	✓	✓		✓	
Edmonds Community College	✓	✓			✓		✓		

Source: TAACCCT Round 2 site visit interviews, 2016.

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