RESEARCH REPORT

Implementation of the Round 3 Trade Adjustment Assistance Community College and Career Training Grants

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Glossary of Key Terms and Acronyms

accelerated learning strategies: Strategies that reduce adult learners' time to completing a program of study by: 1) redesigning curriculum, credentials, and programs to help participants 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 participants or participants with families. Examples include online and hybrid courses, stacked credentials, and prior learning assessments.

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.

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 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 participants to enroll in a more advanced program of study and transfer credit for coursework completed at the institution from where the participant 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 participants can complete coursework on their own time. Participants 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 advisors 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.

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

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

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 participants who are underprepared for college; and 3) helping participants 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.

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

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 as a Second Language.

competency-based education/learning: Programs of study based on 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 participants learn technical skills through on-the-job and simulated work experiences; 2) preparing participants 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 prior learning or work experience: Awarding of credit for a participant's other learning or work experience that demonstrates mastery of competencies or skills for a program of study.

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

DOL: US Department of Labor.

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

GED: general education development; certification of high school-level academic skills; alternative credential to a high school diploma.

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

Integrated Basic Education and Skills Training: Known as I-BEST; 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.

industry mentor: Employee of a firm within a specific industry who helps participants 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 participants 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 participant observes or "shadows" a worker for a designated period to learn about that worker's career.

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.

modularized course: a course that is divided into multiple self-contained units of instruction.

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.

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

prior learning assessment: Involves an evaluation of skills and knowledge acquired from prior coursework or outside the classroom (i.e., workplace) for the purpose of recognizing mastery 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 participants 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.

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

self-paced learning: Participants 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 participants practice occupational skills; also called simulation laboratory or "lab."

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; formerly known as Food Stamps.

support services: services such as transportation, child care, dependent care, housing, and needs-related payments, which are necessary to enable an individual's participation 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.

tankerman and steersman: Occupation in which workers stand watch to look for obstructions in path of vessel, measure water depth, turn wheel on bridge, or use emergency equipment as directed by captain, mate, or pilot; performs a variety of maintenance tasks to preserve the painted surface of the ship and to maintain line and ship equipment; must hold government-issued certification and tankerman certification when working aboard liquid-carrying vessels.

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

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.

TRIO programs: Federal outreach and student services programs targeted to serve and assist low-income individuals, first-generation college students, and individuals with disabilities to progress through the academic pipeline from middle school to postbaccalaureate programs.

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 participants 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. programs including the development of a state or local plan.

work-based learning: Education and training strategies that enable participants to gain or enhance their skills while employed or 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 the grants.[1] Focused on the third round, this implementation report summarizes key findings based on a survey of all Round 3 colleges that participated in the grants, totally 187 colleges, and interviews and focus groups conducted during site visits to 14 Round 3 colleges.

The national evaluation builds evidence about the capacity-building strategies and career pathways approaches implemented by the grantees.[2] The national evaluation uses a mix of qualitative and quantitative methods to understand and assess the capacity-building strategies funded by the grant program to inform future federal workforce investments and policy. Its components include an implementation analysis, syntheses of third-party evaluation findings, an outcomes study, and an employer perspectives study (see box ES.1).

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[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.

[2] For the purpose of the national evaluation, career pathways approaches to workforce development offer a sequence of articulated education and training programs in 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.

TAACCCT National Evaluation Components and This Report

- An *implementation study* (Rounds 1 & 2, **Round 3 (this report)**, and Round 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
- *Syntheses of third-party evaluation findings* (Rounds 1 & 2, Round 3, and Round 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

This report presents findings from the Round 3 implementation study. The main question of interest for this implementation study is: *What are the types of emerging ideas for service delivery improvement and/or system reform that seem the most promising*? 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 implications of these findings that can be useful to policymakers, practitioners, and others wishing to replicate the strategies implemented by the TAACCCT colleges.

Background

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 grants were to target workers eligible 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.[3] The grant program funded colleges in all 50 states, the District of Columbia, and Puerto Rico in each round.[4] DOL awarded 57 grants in Round 3 involving 187 colleges, which are the focus of this report. 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 designed to ensure that the strategies implemented by the TAACCCT colleges would accelerate

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

[4] For information on the grants awarded by state, see TAACCCT state profiles at https://www.doleta.gov/taaccct/state-profiles.cfm.

[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.

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 procure a third-party evaluator to assess the implementation and outcomes of the grant-funded activities.

The Round 3 implementation study is one component of the TAACCCT national evaluation. The implementation study uses two primary sources of data. First, the evaluation team administered an online survey to all TAACCCT colleges—single-institution grantees, consortium-lead institutions, and consortium-member institutions—for each round of the grants. 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 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.

Implementation Successes and Challenges of the Round 3 TAACCCT Grants

The Round 3 colleges experienced various implementation successes and challenges through the grant period as highlighted in the findings from the implementation study. The insights gleaned from the findings can help others wishing to replicate or scale the strategies they implemented and possibly avoid the pitfalls that they encountered. The implementation successes and challenges below draw on the findings presented throughout this report, relying on an analysis of data from a survey of all colleges, totally 187 colleges, that participated in the Round 3 grant activities and visits to 14 colleges.[8]

Key Implementation Successes

The Round 3 colleges indicated that they experienced many successes in implementing their grant projects, both in building capacity to provide education and training to adult learners and to align key partnerships across the workforce system and with industry. The key successes identified in the findings from the implementation study were:

- **The grants supported the colleges' efforts to build their capacity to serve adult learners through increased staffing, new and enhanced curricula, expanded access to student supports, and improved training facilities with updated equipment.** Based on both the survey and site visit data, colleges widely developed multiple learning and support service strategies to accelerate learning, support persistence and completion, and connect participants to

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[8] The survey response rate was 100 percent although respondents could choose not to answer questions.

employment. Most colleges surveyed and visited also developed and leveraged various partnerships inside and outside the college to ensure the successful implementation of the strategies.

▪ **Most colleges visited spent a significant part of the planning phase creating new or enhancing existing curricula that would be responsive to the skill needs of employers.** Employers and industry associations helped shape curricula through their involvement in advisory committees, ensuring curricula were tailored to the skills and credentials needed for specific career pathways. Curricula also informed investments in state-of-the-art equipment. Some consortia also developed core curriculum for a career pathway that was adopted and adapted across the member colleges.

▪ **Over 80 percent of colleges embedded stackable and latticed credentials and over half supported transfer and articulation into programs to support advancement along a career pathway.** Colleges developed or enhanced credentials to allow participants to "stack" credentials, most commonly certificates of one year or less and professional/industry-recognized certifications. These credentials were often then linked to more advanced programs through transfer and articulation agreements as a part of a career pathway. While many of the colleges visited already had transfer and articulation agreements in place when the grant started, several colleges visited successfully developed new or strengthened existing agreements with other colleges and universities so that participants could transfer credits from the grant-funded program to a four-year institution. Some of the colleges visited also developed transfer and articulation agreements with colleges and universities across state lines.

▪ **The grants seemed to help colleges develop strategies to accelerate learning and improve persistence in programs of study for adult learners by creating learning environments to support participation outside of traditional classroom settings and scheduling.** Over 70 percent of the colleges surveyed developed programs that blended in-person and online courses to provide more flexibility for taking courses but also ensured that participants had hands-on practice for the skills they were learning. Programs developed by colleges surveyed also used various instructional design methods such as modular courses and self-paced learning to help adult learners, who often have work and family commitments, to have a more realistic schedule for making progress in their grant-funded program.

▪ **Work-based learning was a central feature of programs for many colleges to provide participants with job-related skills through hands-on practice.** Nearly 60 percent of the colleges surveyed offered internships as work-based learning opportunities for participants. Less common work-based learning opportunities included on-the-job training, clinicals, and apprenticeship. Another important way participants accessed work-based learning opportunities was the use of work simulations, for which the colleges visited purchased new training equipment and technology so participants could practice their new skills on campus or online.

▪ **Colleges sought to build and enhance supports for adult learners to persist and complete their programs of study, but also help them transition to new jobs or positions within their company.** Nearly 80 percent of the colleges surveyed provided career navigation, coaching, or counseling to participants to help them connect to employment opportunities. Some of the colleges visited built soft-skills training into the program curricula, focusing on workplace behavior, teamwork, attendance, and punctuality. The colleges surveyed also developed partnerships within their institution and with external organizations, most commonly with employers and industry and the public workforce system, to help participants with their employment goals. Several of the colleges visited identified a staff person to serve as an

outreach coordinator, who focused on employment and internship opportunities and industry- and community-partner relations. In each case, the project director viewed the outreach coordinator as a key element to their program's success.

▪ **Employer and industry contributions to the grant project helped colleges better align grant-funded programs with employers' workforce needs.** Staff at the colleges visited indicated that employers and industry helped support the programs by providing monetary support and training equipment, work-based learning opportunities at worksites, input on program design and equipment purchases, and hiring graduates or promoting employees who participated in the programs. According to the colleges visited, these contributions allowed colleges to increase their capacity to serve the needs of local industry and train better-prepared workers.

▪ **Colleges could also better serve participants through partnerships with other external organizations.** About two-thirds of colleges built or expanded partnerships with social service agencies and community organizations to support their participants' persistence and completion and connections to employment. Several of the colleges visited highlighted the successful relationships they built with these community partners, especially to provide low-income participants with much-needed services and supports that the colleges could not offer. In some cases, the public workforce system also filled gaps for things that grant funds did not cover, such as tuition and job readiness workshops. Other college staff noted how partnerships with American Job Centers, other training providers, and other community organizations supported outreach and recruitment.

Key Implementation Challenges

The Round 3 colleges experienced challenges in other aspects in implementing their projects such as not being able to move quickly to start the project due to institutional constraints, difficulty partnering with the public workforce system, and ensuring the sustainability of the grant activities after the grant ended. These challenges could hinder capacity building for the colleges in developing grant-funded programs, helping participants access supports, and developing partnerships with external organizations. The key challenges identified in the implementation study were:

▪ **Planning and designing grant activities took more time than the six-month planning period for the grant.** Planning and designing the grant-funded programs and other activities such as developing internal and external partnerships were important challenges noted by the colleges visited. The lengthy curricula approval process in some of the colleges visited, up to two years for credit-bearing programs in a few cases, could hinder the launch of grant-funded programs, setting back recruitment and enrollment for the college. In addition, it took time to build internal support for changing or enhancing various policies such as credit for prior learning and transfer and articulation agreements. Colleges with experience participating in prior rounds of TAACCCT tended to leverage the lessons from that experience to anticipate and proactively address challenges in the implementation of their programs in Round 3.

▪ **Challenges communicating across members of a consortium appeared to lead to uneven implementation of grant activities.** The consortium-lead colleges visited sought to overcome this issue by regularly convening project directors and staff through meetings and telephone conference calls and developing project workplans that set forth timelines and key activities. Lead colleges also provided ongoing information, such as on best practices from other colleges or engaging a national technical assistance provider, to help support successful

implementation. In general, colleges with previous TAACCCT experience felt better prepared to coordinate across member colleges.

- **Recruiting adult learners prepared for enrollment in grant-funded programs could be difficult as many had work and family commitments or low basic skills.** Across the colleges surveyed, the challenges most frequently cited were conflicts between work and school hours for participants, difficulties with identifying and finding eligible participants, and low basic skill levels of applicants. Participants at the colleges visited noted the challenges of balancing work, school, and family and that online courses were not necessarily a good substitute for face-to-face time with instructors.

- **At times, there were roadblocks to engaging new employer partners and increasing or sustaining the level of involvement of existing partners to aligning programs with industry needs.** First, some of the colleges visited found it difficult to engage employers beyond advisory group meetings, such as getting them to commit to interviewing participants or making monetary or in-kind donations. Challenges obtaining the college administration's approval for equipment purchases, budgets, or other plans were sometimes a challenge in partnering with employers, as it would cause delays in launching programs. Some of the employers interviewed expressed frustration that the colleges could not always adapt grant-funded programs to the employers' needs as quickly as they would like.

- **Partnerships with public workforce development system did not always materialize as planned.** Across the colleges surveyed, the most common resource the public workforce system provided was referrals to grant-funded programs. However, some of the colleges visited had few American Job Center customers referred to grant-funded programs. Colleges experiencing more success with public workforce system partnerships reported struggling with the system's inability to provide services for customers ineligible for Workforce Innovation and Opportunity Act funding.

- **While colleges had plans to sustain many of their programs and other activities after the grant ended, the lack of certainty around funding made it difficult to fully institutionalize various components of the projects.** The project directors interviewed indicated that course content taught by existing faculty and policies such as credit for prior learning were sustainable. However, some staff positions, such as navigators or coaches, which were integral to participant support, were not sustainable, unless these positions were absorbed into colleges' operating budgets. Some staff also thought that facility and training equipment upgrades could be sustained but rapid technology changes could render state-of-the-art equipment obsolete, requiring new investment on the part of the college and its partners.

Implications for Future Workforce and Community College Initiatives

The findings from the Round 3 implementation study offer key insights into emerging strategies that policymakers, practitioners, and others may want to consider as they develop new initiatives for educating and training adult learners. These insights build on and align with findings from other national evaluation components, including the implementation study of the Rounds 1 and 2 grants, the synthesis of the Rounds 1 and 2 third-party evaluation findings, and the employer perspectives study.

Implications from these findings may apply to future initiatives that support community colleges similar to the TAACCCT grant program but also those targeted at other education and training providers and workforce system organizations leading efforts to educate and train adult learners. This section uses evidence from the implementation study findings to present implications that are relevant for both future grantees and policymakers. The findings suggest the following:

- **Colleges may need longer planning and design periods for large-scale institutional and systems changes that TAACCCT funded.** Community colleges often had lengthy curriculum development, hiring, and procurement processes that took significant time to complete. The colleges also needed adequate planning time to permit partners that are both internal and external to the college to contribute to the design and implementation of a project. Round 3 colleges that had grants from earlier rounds believed that their ability to build off previous efforts to implement allowed for a more seamless design phase for developing programs of study, support services, and partnerships to support a quicker launch of the project.

- **It may also take time to fully implement grant activities and then realize the short- and long-term outcomes, often after the end of the grant.**[9] New policies and procedures, such as credit for prior learning and transfer and articulation agreements, took colleges time to fully implement within their institution or across colleges and for participants to benefit from them. For example, some colleges visited developed a prior learning assessment to award credit during the grant period but did have time to fully implement it with participants on a large scale. Colleges also highlighted that changing the way they serve adult learners, such as using technology for classes or to provide student supports, also required culture shift over the long run among faculty and other staff as they adapted to these new methods. Finally, the long-term educational and employment benefits of participating in the grant-funded programs could take years for participants to realize, especially if participants continued their education and training as a part of a career pathway.[10]

- **Using a range of recruitment methods and partners may be necessary to help colleges reach adult learners and meet their workforce needs.** Many colleges relied on "word-of-mouth" to recruit adult learners through existing student networks. However, colleges used other tools to recruit adult learners, especially those balancing work and family with the demands of school. Some colleges developed marketing materials that included messages about the college helping them accelerate learning, support their persistence in and completion of their program, and find a new job or get promoted in their current job to allay concerns of potential students. In addition, colleges used multiple outlets to reach potential students—whether through media (including social) or referrals from American Job Centers or employers.

- **While accelerated learning strategies can help reduce time to completion of a program, embedding flexibility in scheduling and instructional design can help students who may be combining work and school or prefer more in-person classroom time.** Some participants indicated that they struggled with courses where a lot of material was covered in a short amount of time. However, using strategies such as modular and self-paced courses seemed to allow participants to go at their own pace. Instructor availability and other academic supports

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[9] See section 1.2 for the conceptual framework that describes short- and long-term outcomes.

[10] Findings on the impact of the TAACCCT grant projects on participants' education and employment outcomes are presented in the reports synthesizing the third-party evaluation impact findings as a part of the national evaluation. However, impacts were measured within the grant period, not after, so only short-term outcomes were captured.

such as tutoring also were reported to help alleviate some of the challenges of more accelerated coursework. In addition, some participants said that they missed face-to-face interactions with their instructors when courses were all online. Hybrid courses, which mix in-person and online coursework, helped support participants who want more face-to-face interaction with instructors.

- **Efforts to collaborate across community colleges can support development of career pathways for students to help them advance in their education and in the workforce.** Cross-college or statewide coordination were reported as helping facilitate the development of curriculum and credentials for a pathway or transfer and articulation agreements to support college and career advancement. For example, statewide development of transfer and articulation policies were designed to allow for credits to transfer and participants to enroll in more advanced programs with fewer barriers. Colleges reported that developing these collaborative efforts could be a slow process for the colleges, as it could take time to develop relationships with leaders and administrators at other colleges or coordinate with the state education agency or board of regents.

- **Making sure work-based learning opportunities that are directly tied to jobs are available for students appears to require close collaboration between community colleges and employers.** Colleges developed work-based learning at worksites as a valuable way for participants to build and practice occupational skills and gain exposure to workplace culture. To do so, colleges had to conduct targeted outreach to and build relationships with employers. They also had to engage employers in developing simulated work experiences provided on campus or online to ensure the experiences supported development of skills that they needed. Colleges found that having a coordinator on staff to lead outreach to and maintain relationships with employers supported development of work-based learning opportunities, whether they were on a worksite or in a simulated setting.[11]

- **Ensuring access to financial and personal supports can help adult learners that may have difficulty participating in education and training due to financial constraints or transportation or child care needs.** For participants, a common challenge was the financial and personal barriers to participating in education and training. Participants and college staff reported that enrolling in education and training programs often took time away from work and family and could cause financial strain for participants. Many colleges facilitated access to supports participants needed to persist in and complete their programs. Colleges also developed and enhanced partnerships within their institution (e.g., financial aid office) and with community organizations and social service agencies to offer needed supports such as federal financial aid, scholarships, transportation, and child care for adult learners.

- **Career navigators (or coaches or counselors) can develop connections to employment for students, in addition to supporting college persistence and completion.** Colleges brought on navigators to support participants' persistence and academic success, offering guidance on career pathways and coursetaking, proactively checking on participant progress, and intervening when needed. But one of their main roles was to help participants successfully transition to the workforce by providing career services such as counseling and assessment, job search assistance, and professional skills training. In some cases, they coordinated with staff at American Job Centers to work with participants. Navigators would also help participants line up work-based learning opportunities at an employer site.

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[11] For more insight on employers' perspectives on relationships with community colleges, see Scott et al. 2018.

- **Planning with college leadership early in the grant can help colleges ensure that capacity-building activities are sustained and institutionalized after the grant ends.** Project directors recommended working upfront with college leadership on sustainability planning, because the colleges ultimately needed to secure ongoing funding for programs, faculty and staff, and training facilities and equipment. Some activities such as internal policy changes did not require additional funding but needed leadership support to continue their implementation. When project staff focused on sustainability and emphasized it from the beginning of their grant, it gave them time to work with college leadership on continued investments in programs and to institutionalize policies, partnerships, and student supports.

Replicating and improving on the strategies and experiences of the TAACCCT grantees across all rounds can inform future grant initiatives to build the capacity of community colleges to serve adult learners. This report builds on a report on the Rounds 1 and 2 colleges as a part of the implementation study and is followed by a similar report on the Round 4 colleges, based on the survey findings. There are two reports synthesizing the Round 3 third-party evaluation findings, one on the implementation findings that focuses on the systems changes grantees made to build their capacity to serve adult learners and one on the impact findings that focuses on participants' educational and employment outcomes.[12] A report synthesizing the Round 4 third-party evaluation implementation and impact findings builds on other synthesis reports. Other publications from the national evaluation—a series of briefs providing an overview of the grant program, a synthesis of the Rounds 1 and 2 third-party evaluation findings, findings from an outcomes study of nine Round 4 grantees, and an employer perspectives study—are also available or being developed. These reports are designed to support learning across the grant program to draw lessons and implications for future community college and workforce initiatives that support career pathways and capacity-building efforts at community colleges.

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[12] 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.

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 was 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 2011–2018 in partnership with the US Department of Education.[13]

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 adult learners, 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.

The TAACCCT national evaluation, which is sponsored by DOL's Chief Evaluation Office and led by the Urban Institute, seeks to build evidence about the capacity-building strategies and career pathways approaches implemented by TAACCCT grantees.[14] This report, part of a series of publications from the

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

[14] 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.

national evaluation, describes the grant-funded projects implemented by the Round 3 colleges.[15] The introduction provides an overview of the grant program, the national evaluation, and the implementation study design for Round 3. The body of the report presents findings from the Round 3 implementation study, based on the responses to an online survey of colleges and interviews and focus groups from fieldwork to 14 Round 3 colleges that led local grant projects. The report concludes with a discussion of key findings and implications for policymakers and practitioners looking to replicate the strategies implemented by Round 3 colleges.

1.1 The TAACCCT Grant Program and Career Pathways

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.[16] 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 funded both individual institutions and multicollege 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.[17] This section provides a summary of the goals of the TAACCCT 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[18]

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[15] This report builds on the first implementation report on Rounds 1 and 2 grants (see Eyster et al. 2019). Reports on the implementation of the Round 4 grants will also be published. See DOL's Chief Evaluation Office's webpage with publications from completed studies at https://www.dol.gov/agencies/oasp/evaluation/completedstudies.

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

[17] 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.

[18] 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.

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, 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.[19] *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.[20,21]

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) (see appendix B to see the core elements across the four rounds). 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 procure a third-party evaluator to assess the implementation and outcomes of the grant-funded activities.

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[19] 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.

[20] 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.

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

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 TAACCCT colleges, the national evaluation team identified three categories of 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 the strategies within each category highlighted in this report.[22,23]

The grant announcements across all four rounds emphasized the importance of developing career pathways. Core elements of the grants included stacked and latticed credentials, strengthening online and technology-enabled learning, and using evidence-based design with either new or existing strategies that have shown preliminary or past success (see appendix B for key components in the grant announcements).[24] The grant announcements 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. Lastly, the grant announcements required grantee participation in national evaluation activities and, for Rounds 2–4, a third-party evaluation to assess the implementation and outcomes of the grant-funded activities.

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[22] 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.

[23] The glossary provides definitions of the specific strategies identified in this report.

[24] For more on evidence-based design, see US Department of Education's report "Identifying and Implementing Educational Practices Supported by Rigorous Evidence: A User Friendly Guide," https://www2.ed.gov/rschstat/research/pubs/rigorousevid/rigorousevid.pdf.

FIGURE 1.1

Types of Strategies Identified by the TAACCCT National Evaluation

ACCELERATED LEARNING	PERSISTENCE AND COMPLETION	CONNECTIONS TO EMPLOYMENT
Colleges reduce adult learners' time to completing a program of study by:	Colleges support adult learners' enrollment, progress, and completion of programs of study by:	Colleges connect adult learners to the workforce by:
▪ redesigning curriculum, credentials, and programs to help students move through coursework more quickly and earn credentials as they progress through programs;	▪ providing academic and nonacademic support services;	▪ developing curriculum to help students learn technical skills through on-the-job and simulated work experiences;
▪ aligning college enrollment, credit award, and other college policies; and	▪ redesigning developmental and adult education programming for students who are underprepared for college; and	▪ preparing students for the workforce by providing guidance on career options, building job readiness skills, and helping support job search activities; and
▪ using technology and course scheduling to support learning for working students or students with families.	▪ helping students easily transfer to more advanced programs of study and applying credits that they have already earned to persist in postsecondary education.	▪ building partnerships with employers, industry associations, the public workforce system, and other organizations to support successful transitions to the workforce

STRATEGIES HIGHLIGHTED IN THIS REPORT

Accelerated Learning	Persistence and Completion	Connections to Employment
▪ 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	▪ 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	▪ career navigators ▪ clinical placements ▪ cooperative education or work-study program ▪ employer and industry partnerships ▪ industry mentors ▪ internships ▪ job shadowing ▪ occupational preparatory classes ▪ on-the-job training other than registered apprenticeship ▪ public workforce system partnerships ▪ registered apprenticeship ▪ simulations ▪ work-based learning

Source: Eyster 2019.

TAACCCT Colleges

Eligible institutions of higher education, community colleges and other postsecondary institutions across the US applied for TAACCCT grant funding.[25] The TAACCCT grant program funded 256 grants to institutions in all 50 states, the District of Columbia, and Puerto Rico. Across the 256 grants and four rounds of TAACCCT 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.[26,27] 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. Of the 57 grants awards in Round 3, 43 were competitive—23 single-institution and 20 consortium grants—and 14 were state-designated grants. The period of performance for Round 3 grants was October 2013 through September 2017.

Across single-institution grantees, lead consortium grantees, and consortia member colleges, a total of 729 unique postsecondary institutions participated in grant-funded projects across the four rounds.[28] 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 (60 percent)

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[25] 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.

[26] Within the grant announcements, 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.

[27] 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.

[28] 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.

participating in the grants were involved in one grant project.[29] 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 TAACCCT activities, 82 percent were two-year, public, degree-granting institutions.[30] 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 (Cohen et al. 2017).[31]

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.[32] Most grantees (88) received awards between $2.5 million and $5.0 million, with the number of grantees receiving smaller awards (less than $5.0 million) growing by Round 4. Most Round 3 awards (35 of 57) were between $2.5 million and $5.0 million. Ten Round 3 awards were large—between $20 million and $25 million—with the remaining 12 grants between $5.0 million and $20 million.

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, builds evidence about the capacity-building strategies and career pathways approaches implemented by TAACCCT grantees. 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

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[29] The number of colleges per grant was determined by the list of identified colleges in the consortium grant applications. This number may be an underestimate because some grantee institutions identified as community college districts as opposed to uniquely identifying all colleges participating within that district.

[30] There are three colleges participating in TAACCCT identified as being less than two-year institutions (below associate level). For analysis purposes, they have been grouped together with two-year institutions.

[31] The Integrated Postsecondary Education Data System identified 934 postsecondary institutions in the United States as two-year, public, degree-granting colleges in the 2013–14 school year. http://nces.ed.gov/programs/digest/d14/tables/dt14_317.10.asp.

[32] 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.

effectiveness and understanding of community college innovations for providing training to adult learners.[33] 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.

FIGURE 1.2
TAACCCT Conceptual Framework
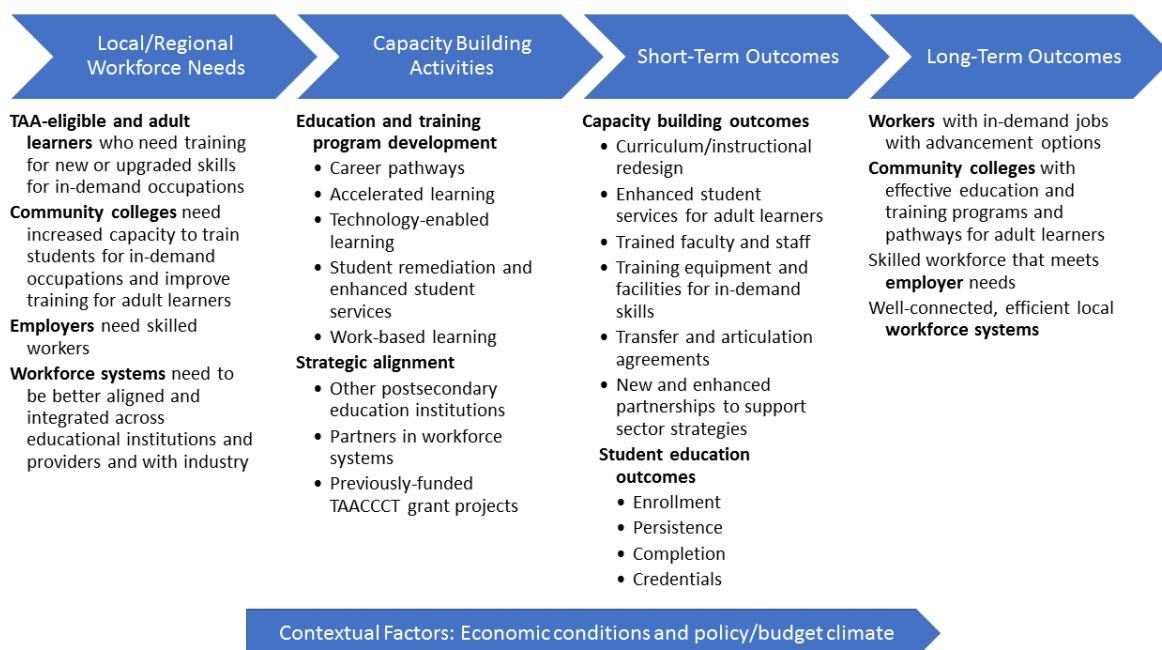
Source: The Urban Institute and its partners developed the conceptual framework as a part of the TAACCCT national evaluation. This framework has been updated from the original design to reflect all rounds of the TAACCCT grants. Some activities may not apply to all rounds, such as the strategic alignment 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.

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

The framework highlights how the TAACCCT grant program funded improvements to colleges' capacity to educate and train adult learners 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.

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 also 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. 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 on the Round 3 colleges.

TAACCCT National Evaluation Components and Publications
- An *implementation study* (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*
  - ➢ **Implementation of the Round 3 Trade Adjustment Assistance Community College and Career Training Grants – Final Report (this 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 study uses two primary sources of data. First, the evaluation team administered an online survey to all TAACCCT colleges—single-institution grantees, consortium-lead institutions, and consortium-member institutions—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 fieldwork to 14 colleges that participated in 10 Round 3 grants to gain an in-depth understanding of the implementation of the grant activities from multiple perspectives. Table 1.1 identifies the 14 colleges and the grant projects in which they participated. These 10 grants were selected to represent a range of grant experiences. Additional details on the study's methods and data collection are provided in appendix C. Appendix D provide more information on the 14 colleges and the grants with which they are associated.

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, the universe is the 187 colleges that participated in the 57 Round 3 grants, with 100 percent of the colleges responding to the survey. (Appendix E provides survey responses for Rounds 1-3 colleges.) Results from fieldwork to 14 colleges that participated in 10 Round 3 grants are presented. Box 1.2 provides additional explanation the key terms used for the implementation study.

TABLE 1.1
Round 3 TAACCCT Colleges Visited and Associated Grant Project Name

TAACCCT Grant Project Name	TAACCCT College Visited	Type of Grant
Mississippi River Transportation, Distribution, and Logistics (TDL) consortium	Lewis & Clark Community College (IL) Hinds Community College (MS)	Multistate consortium (9 members)
Better Occupational Outcomes with Simulation Training (BOOST) consortium	Midlands Technical College (SC) Wallace Community College Selma (AL)	Multistate consortium (6 members)
Intentional Networks Transforming Effective and Rigorous Facilitation of Assessment, Collaboration, and Education (INTERFACE) consortium	Northcentral Technical College District (WI) Madison College (WI)	Single-state consortium (17 members)
Colorado Helps Advanced Manufacturing Program (CHAMP) consortium	Front Range Community College (CO) Pikes Peak Community College (CO)	Single-state consortium (8 members)
Rural Recovery and Revitalization (R3)	Missouri State University-West Plains (MO)	Competitive single institution
North Dakota Advanced Manufacturing Skills Training Initiative (NDAMSTI)	North Dakota State College of Science (ND)	Competitive single institution
Construction Pre-Apprenticeship/Heavy Duty Alternative Fuels	Long Beach City College (CA)	Competitive single institution
STEM-Connect	University of Vermont and State Agricultural College	Competitive single institution
Cyber Security STEM Bridge and Cyber/Digital Academy	Community College of Baltimore County (MD)	State-designated single institution
Arizona Advanced Manufacturing Institute (AzAMI)	Mesa Community College (AZ)	State-designated single institution

Source: TAACCCT Round 3 grant applications and Urban Institute site visits, 2017.
Note: Project acronyms are used throughout the text. For consortium grants, the first college listed within the grant project is the lead institution for the consortium. STEM = science, technology, engineering, and mathematics.

BOX 1.2

Terms for the National TAACCCT 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.

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.

grant staff: Staff working directly under the grant director to support implementation of all grant-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 that enrolled 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.

project 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.

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

1.3 Organization of the Report

The remainder of this report presents the implementation findings for the Round 3 grants. It is organized as follows:

- **Chapter 2** presents basic characteristics of the colleges and their local grant projects, including their geographic reach, the economic context in which the projects operated, and the industries and occupations of focus.

- **Chapter 3** presents the implementation activities of the colleges, including the organization and structure of the projects, planning activities colleges conducted, curriculum development, the facilities and infrastructure built with grant funds, the funding and leveraged resources used, the faculty and staff hired, and the processes for monitoring participant progress.

- **Chapter 4** describes who the colleges targeted for their programs of study and how colleges recruited and enrolled participants.

- **Chapter 5** documents the key components of the programs of study developed using grant funds, highlighting the education and training strategies colleges implemented to accelerate learning, support college persistence and completion, and connect participants to employment.

- **Chapter 6** presents the academic, financial, personal, and career services that colleges helped participants access during their grant-funded programs.

- **Chapter 7** describes the variety of partnerships colleges developed and enhanced during the grant period and the successes and challenges the colleges encountered.

- **Chapter 8** highlights how colleges planned to sustain the strategies they implemented and the partnerships they developed during the grant and the challenges they expect to face in sustaining the programs and other activities implemented as a part of their grant projects.

- **Chapter 9** concludes the report with a summary of the key implementation successes, challenges, and lessons learned and offers implications for future community college and workforce initiatives and policy.

2. Characteristics of the TAACCCT Colleges and Projects

This chapter describes the basic characteristics of all Round 3 TAACCCT colleges' and their projects based on the survey, including the geographic reach of the projects, the context in which they operated, and the industries and occupations of focus. Throughout the chapter, information on the characteristics of the 14 colleges visited and their local projects provides a more detailed picture of the grant activities and the colleges that implemented them.

These are key findings from this chapter:

- Across the Round 3 colleges surveyed, they often reached potential participants across multiple geographic areas, but most often targeted rural areas, similar to the Rounds 1 and 2 colleges.

- The most significant factors identified by the colleges surveyed as shaping the design of their grant-funded programs was the economic recovery or expansion in the region or locality. About two-thirds of colleges had been substantially or somewhat affected by layoff and plant closings in the five years before the grant began.

- Almost half of the colleges surveyed targeted their local projects on the manufacturing industry, followed by information technology and health care and social assistance. Advanced manufacturing was also the most commonly targeted industry among the local colleges visited.

- The colleges visited used grant funds to develop programs with curricula that aligned with local and regional industry needs, informed by local labor market data and guided by the goal of preparing students for in-demand careers.

2.1 Geographic Reach of the TAACCCT Projects

The TAACCCT grants provided funding to colleges serving diverse geographic areas across the United States. As shown in figure 2.1, most (81 percent) of the Round 3 colleges served a geographic area larger than a single county. Just over half of the colleges reported serving multiple counties within a state, and nearly a fifth reported serving every county in a state.

FIGURE 2.1

Geographic Area Served by Round 3 TAACCCT Colleges
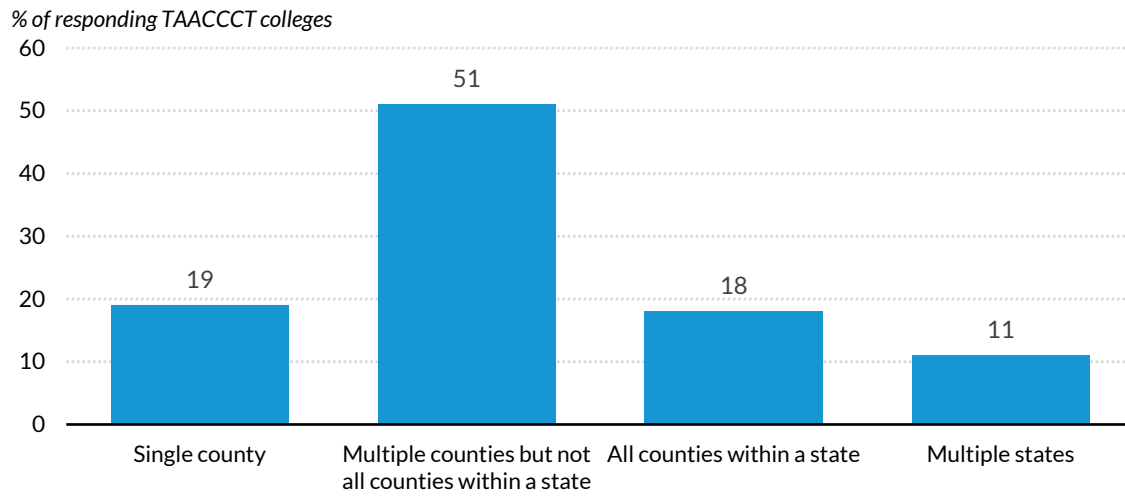
% of responding TAACCCT colleges

Source: Urban Institute survey of Round 3 TAACCCT colleges, 2016–17.
Note: N=185; two missing colleges.

Accordingly, colleges reached participants and workers spread across urban, suburban, and rural areas. As shown in figure 2.2, two-thirds of colleges characterized some part of their service areas as rural, and half characterized some portion as urban. Nearly two-fifths of the colleges reported serving suburban areas.

FIGURE 2.2

Round 3 TAACCCT Colleges Serving Urban, Suburban, and Rural Service Areas
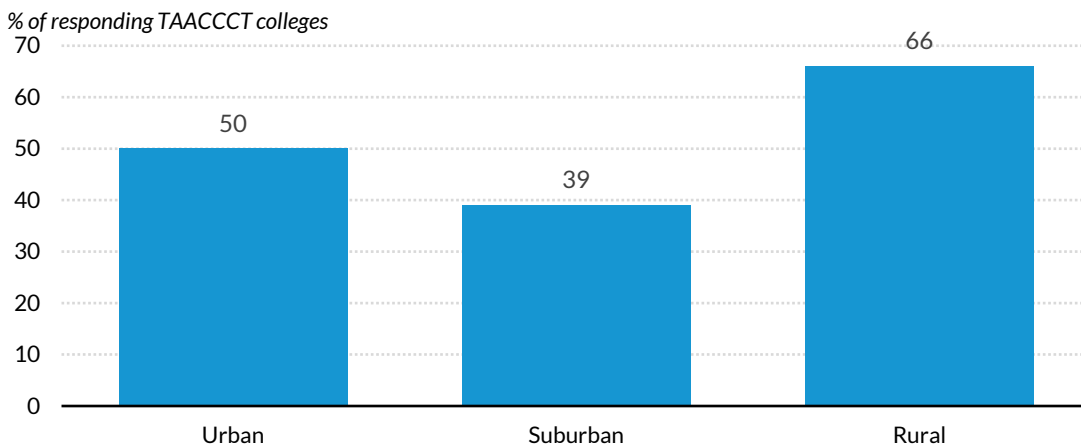
% of responding TAACCCT colleges

Source: Urban Institute survey of Round 3 TAACCCT colleges, 2016–17.
Notes: N=184; three missing colleges. Respondents could provide more than one response, and therefore percentages do not add up to 100.

2.2 Economic Context for the TAACCCT Projects

The survey asked the Round 3 colleges to characterize economic conditions in the areas they served in the five years leading up to the start of their grant as well as in the years since the start of their grant. Overall, the colleges reported improving economic conditions in the areas they served when comparing the five years prior to grant receipt with the years since the start of their grant. As shown in figure 2.3, over two-thirds of colleges indicated that that they had been either substantially or somewhat affected by plant closings and layoffs in the five years prior to the start of their grant, with just under one-fifth reporting that their areas were hardly affected. In contrast, less than half of the colleges indicated that their area had been substantially or somewhat affected by plant closings and layoffs since their grant started, with only 12 percent reporting a substantial effect.

FIGURE 2.3

Extent to Which Area Served Has Been Affected by Plant Closings and Layoffs in the Five Years Prior to and the Years Since the Start of the Round 3 TAACCCT Grant
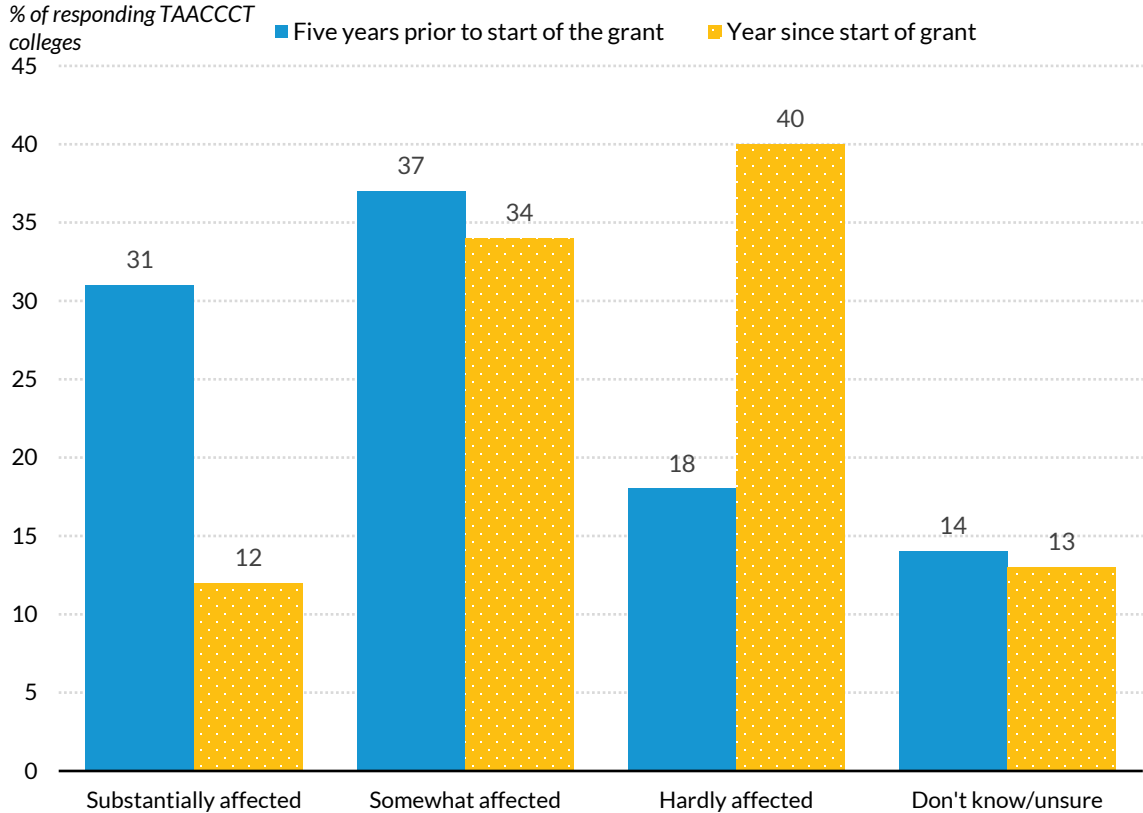
Source: Urban Institute survey of Round 3 TAACCCT colleges, 2016–17.
Notes: Five years prior to the grant: N=185, two missing respondents; Years since start of grant: N=186, 1 missing respondent.

Colleges also identified significant factors that influenced the design or implementation of their local projects within the past three years. As shown in table 2.1, over three-quarters of colleges identified economic recovery or expansion in the region or locality as a significant factor shaping the design of their local project, up from 50 percent in Rounds 1 and 2. Other factors identified as having influenced project design in Round 3 included organizational/management changes or restructuring (30 percent), receipt of new funding/grants (30 percent), an increase or decrease in TAA-certified plant closings (26 percent), and population/demographic changes in the region/locality (18 percent).

TABLE 2.1
Significant Factors in Shaping the Design of Round 3 TAACCCT Local Projects

Significant Environmental Factor over the Past Three Years Impacting Design or Implementation of TAACCCT Grant	% of Colleges
Economic recovery/expansion in the region/locality	76%
Organizational/management changes or restructuring	30%
Receipt of new funding/grants by your institution	30%
Increase/decrease in TAA-certified plant closings	26%
Population/demographic changes in the region/locality	18%
Loss of funding/grants by your institution	10%
Employer demand/workforce alignment changes	10%

Source: Urban Institute survey of Round 3 TAACCCT colleges, 2016–17.
Notes: N=184; three missing colleges. Percentages do not add to 100 percent. Respondents could provide more than one response.

The local and regional economic environment affected the design and implementation of the local projects at each of the 14 colleges visited, according to the staff interviewed. Over the course of the grant period, the local unemployment rate in most areas served by the colleges declined considerably due to economic recovery following the Great Recession. However, this was not the case at a few of the colleges given their unique local economic context. North Dakota State College of Science operated in a state with low unemployment (3.5 percent in October 2013) prior to and throughout the grant period, as compared to other areas nationally due to an oil boom. Another college, Missouri State University-West Plains faced high unemployment throughout the grant project.

Local economic conditions motivated some colleges to use their grant funding to build a better pipeline of workers for an established industry sector or to help train workers for growing industry sectors. Wallace Community College Selma's BOOST project was designed to fill the need for skilled health care workers in localities in South Carolina and Alabama served by the consortia member colleges. Likewise, North Dakota State College of Science designed their project to meet the need for skilled employees in the burgeoning manufacturing industry in southeast North Dakota.

For other colleges, the project design centered on opportunities to retrain workers to fill shortages in other industries in the community. At Missouri State University-West Plains, a plant manufacturing closure resulted in a loss of 400 jobs. As a result, some TAA-eligible workers went to Missouri State University-

West Plains to receive training in agriculture occupations. Similarly, a prior labor agreement with the City of Long Beach, California to hire a percentage of workers from the local area led to the development and implementation of Long Beach Community College's preconstruction apprenticeship program, aimed at local jobseekers.

2.3   Industries and Occupations of Focus

TAACCCT colleges typically focused on industry sectors integral to their service area's economy. When the survey asked Round 3 colleges about the top employers within the areas served by their grant, 71 percent of colleges ranked health care and social assistance sectors as one of their top-three industries, and 47 percent ranked manufacturing in their top three. Other sectors ranked among the top three employers by 15 percent or more of colleges were transportation and warehousing, retail trade, accommodation and food services, and professional and technical services.

As shown in figure 2.4, there was considerable overlap between their top-three industries in their area and the industry sectors on which colleges' local projects were focused. Nearly half of all colleges reported that manufacturing was a target industry of their local project, and over a quarter identified health care and social assistance as a target industry. About one-quarter of colleges identified information technology as a sector of focus.[34]

The industries targeted by the Round 3 colleges visited mirrored the industries across all Round 3 colleges to a certain degree. Table 2.2 shows the colleges that targeted each of these industries along with examples of relevant occupations. As with many colleges across Round 3, several colleges visited—Long Beach City College, University of Vermont, and Missouri State University—targeted multiple industries. Colleges' rationales for each targeted industry are discussed next, highlighting specific examples to illustrate project strategies and contexts.

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[34] The Round 3 colleges focused more on information technology and warehousing and less on health care and social assistance, compared to Rounds 1 and 2. See appendix E for a comparison of Rounds 1, 2, and 3 survey results with respect to industry sectors targeted by TAACCCT colleges, as shown in figure 2.4.

FIGURE 2.4
Targeted Industry Sectors of Round 3 TAACCCT Colleges

% of responding TAACCCT colleges

Industry sector
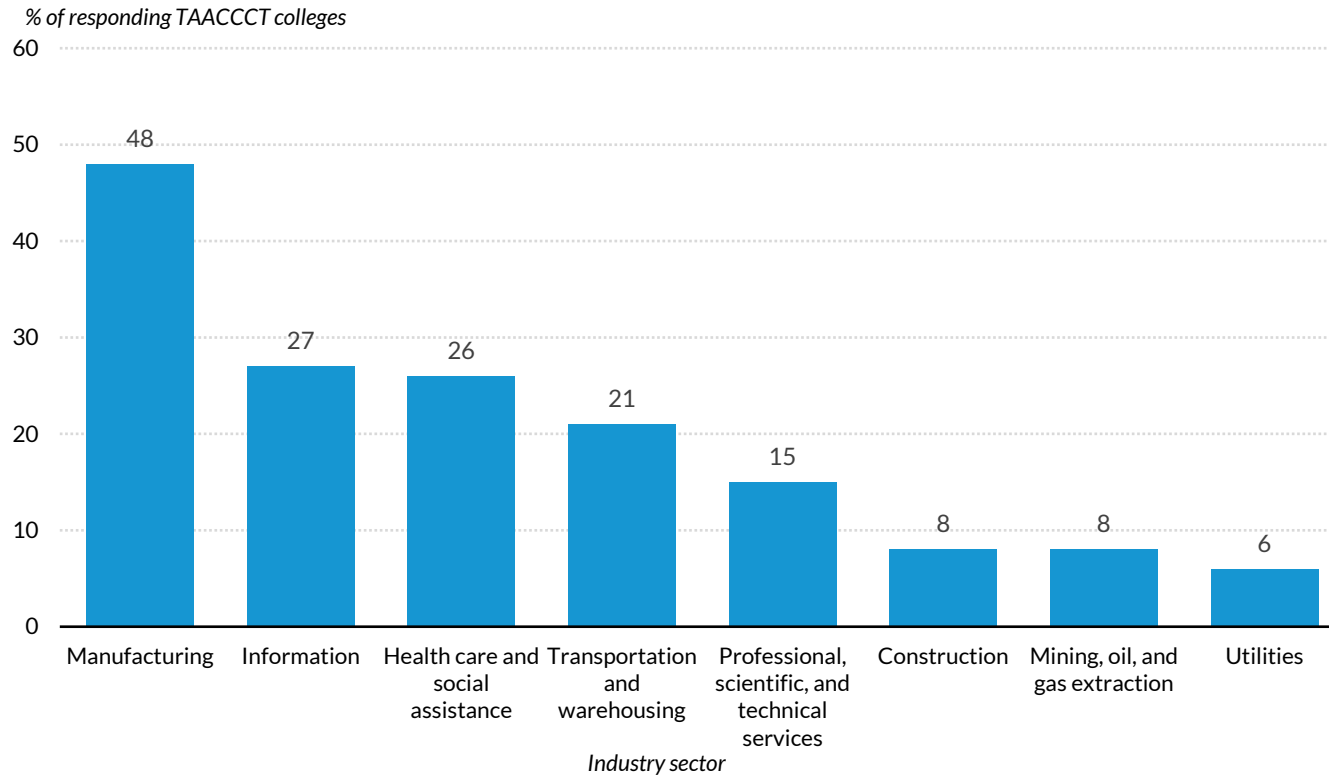
Source: Urban Institute survey of Round 3 TAACCCT colleges, 2016–17.

Notes: N=186, one missing college. Percentages do not add to 100 percent. Respondents could provide more than one response.

TABLE 2.2
Industries Targeted by TAACCCT Colleges Visited with Examples of Occupational Fields

Targeted Industries	TAACCCT Colleges	Occupational Fields		
Advanced manufacturing	Mesa Community College; Long Beach City College; North Dakota State College of Science; Front Range Community College; Pikes Peak Community College	Machinist	Welder	Computer-controlled machine tool operator, computer numerically controlled programmer
Information technology	Community College of Baltimore County; University of Vermont and State Agricultural College; Northcentral Technical College District; Madison College	Computer systems analyst	Information security analyst	Software developer
Health care	Midlands Technical College; Wallace Community College Selma; Missouri State University-West Plains	Patient care technician	Cardiac care technician	Phlebotomist
Energy	Lewis & Clark Community College; Missouri State University-West Plains	Oil refinery and chemical technician	Solar technician	Safety technician
Engineering and math	University of Vermont and State Agricultural College; Long Beach City College	Maintenance technician	Bus and truck mechanics and diesel engine specialist	Actuary, data scientist, mathematician, statistician
Transportation, distribution, and logistics	Lewis & Clark Community College; Hinds Community College	Truck/tractor trailer driver	Logistics and production specialist	River barge operator, deckhand
Agriculture	Missouri State University-West Plains	Animal scientist	Plant scientist	Agricultural management/business
Construction and skilled trades	Long Beach City College	Drywall and ceiling tile installer	Cement masons and concrete finisher	Carpenter, electrician, painter

Source: TAACCCT Round 3 grant applications and Urban Institute site visits, 2017.

Advanced Manufacturing

Advanced manufacturing was the most commonly targeted industry across the colleges. Five of the 14 local colleges visited focused primarily on training participants for occupations in this industry, which included precision machining, electronics, and welding. Depending on the local economy, advanced manufacturing served different industries, such as aerospace, aviation, medicine, and automotive.

Colleges staff indicated that manufacturers in their areas had not been able to fill job openings and approached the colleges to find new employees. For example, Mesa Community College targeted the industry because of 10,000 new job openings projected for 2010 to 2020. An aging workforce, higher

wages, and few training options in their communities were also reasons for developing programs of study in manufacturing. At Lewis & Clark Community College, for instance, hourly wages for welders ranged from $12 to $32, and at Mesa Community College, hourly wages for targeted advanced manufacturing and aerospace occupations were between $18 and $26.

Information Technology

Four colleges focused on the information technology industry. At Community College of Baltimore County, the focus in information technology reflected the prevalence of the industry in the Baltimore and Washington, DC areas, especially in cybersecurity. Similarly, Madison College's knowledge-based local economy made information technology a logical choice for the college's grant-funded programs. For Northcentral Technical College District, staff saw that information technology occupations could meet the needs of employers across multiple industries and reap higher wages for participants.

Health Care

Three colleges targeted occupations in the health care industry, although some focused on the more entry-level, lower-paying occupations. Due to demand in the area, Wallace Community College Selma focused on certified nursing assistants (average annual salary of $22,240) and patient care technicians (average annual salary of $29,686). Missouri State University-West Plains focused on health information technology jobs, such as medical records and health specialists, which could pay a higher wage (average annual salary of $35,900) and was projected to grow in the area.

Other Industries of Focus

As shown in table 2.2, the other industries of focus for five of the colleges visited were: energy; engineering and math; transportation, distribution, and logistics; agriculture and food systems; and construction and skilled trades. A few examples of colleges' decisions to focus on these industries are:

- At University of Vermont, a four-year institution, the science, technology, engineering and math (STEM) sector afforded participants the opportunity to pursue jobs with wages that range from $19 to $43 across all targeted occupations, including engineers, actuaries, and data scientists. University of Vermont targeted the industry because it was a program area of strength for the university, and staff felt that STEM coursework could help prepare participants for in-demand jobs with sustainable wages.

- Transportation, distribution, and logistics was the industry of focus for the consortium led by Lewis & Clark Community College, including Hinds Community College, with job growth projected in the consortium colleges' areas. The occupations of training varied across the colleges based on their local employers' needs. At Lewis & Clark Community College job openings were identified in a variety of different occupations, including automotive technicians,

logistics and operations managers, chemical technicians, truck drivers, welders, and process operations technicians. At Hinds Community College, the focus was on truck-driving and river-barge occupations. Staff reported that the average salary for a truck-driving job targeted by the grant project was about $40,000 to $60,000 and deckhands could first make $29,000 to $31,000 but could move relatively quickly into higher paying jobs with additional certifications and experience.

- A major emphasis of one track of Long Beach Community College's local project was preparing participants for jobs in the construction industry. A project labor agreement between the City of Long Beach, California, and the local union was the impetus for the construction preapprenticeship program started at the college. Program staff and partners commented that the skilled trades include some of the local economy's fastest-growing occupations, while need to replace retiring workers the aging workforce was also a major driver for the grant. Wage rates for construction apprentices could range from $20 to nearly $25 per hour.

3. Implementation Activities of the TAACCCT Colleges

Round 3 colleges undertook many activities to ensure the grant-funded projects were implemented as designed. Projects required many tasks upfront such as planning, curriculum development, and hiring of faculty and staff. Purchasing equipment for updated facilities or creation of new infrastructure were also major activities for the colleges to build their programs of study. Ongoing implementation activities included leveraging various funding sources to complement and sustain the programs of study and monitoring participant progress to track program success. This chapter presents the implementation activities of the Round 3 colleges, including the organization and structure of the projects, planning activities they conducted, curriculum development, the facilities and infrastructure built with grant funds, the funding and leveraged resources used, the faculty and staff hired, and the processes for monitoring participant progress.

These are key findings from this chapter:

- Ten of the Round 3 colleges visited served as the lead institution for the grant activities, playing a key role in communicating policies, procedures, and strategic vision for the consortium-member colleges, but autonomy over local projects was common across colleges.

- The colleges visited that received a TAACCCT grant in a previous round often used their experience to inform management of the grant, drawing upon practices and lessons learned, even when implementing completely new programs in unrelated sectors.

- External partners provided input to colleges visited on numerous aspects of the local projects, including communicating the needs of the local industries; offering guidance on desired industry credentials; and providing input on program design, curricula, and equipment purchases. However, colleges reported challenges with the short amount of time for planning activities before launching their programs of study, the lengthy curriculum approval process, and the shifting needs of targeted industries.

- The colleges visited developed curricula that incorporated feedback from instructors, advisory boards, and representatives from industry. Colleges tailored curricula to the skills and knowledge their participants would need in the field. While most colleges developed curricula for online courses, colleges designed most courses to be presented in person or in a blended format (i.e., a mix of online and in-person instruction), as in-person, hands-on practice was integral to the program.

- Eight of the colleges visited made large-scale improvements to their facilities or infrastructure to support instruction in advanced manufacturing, information technology, and health care – the three most common industries targeted in Round 3. These improvements typically involved upgrading existing facilities with new equipment. Eleven colleges reported purchasing expensive, specialized equipment to support hands-on instruction. Project staff reported that the investments in equipment increased the quality of instruction for their programs.

- The survey showed that the individual colleges participating in Round 3 grants reported that they had received an average of $2.5 million in grant funding, ranging from $108,324 to $25 million. For the colleges visited, grant funds were the primary source of support to implement the programs of study. In addition to the grant funding, these colleges leveraged multiple funding streams, including state and federal public programs, to enhance what they were able to do with their grant funding. They also used in-kind resources from their own institutions and grant partners.

- Most colleges visited hired grant directors, career navigators, and program recruiters, while reassigning instructors from similar programs. All but one of the project directors were internal hires at the college. Some colleges offered professional development opportunities to these staff.

- Tracking participant progress and outcomes was a new expectation for the colleges visited that necessitated purchasing new software, developing new databases, and/or conducting staff trainings on how to collect and track data. For some colleges, tracking data was an institutional practice, and DOL definitions and outcome measures were simply incorporated into the existing systems. Regardless of their familiarity with progress monitoring and outcome tracking, most colleges reported relying on their third-party evaluator for help with tracking participant progress and outcomes.

3.1 Organization and Structure of the TAACCCT Projects

As discussed in chapter 1 and shown in table 1.1, the evaluation team visited 14 colleges that participated in 10 grants. Six were single-institution grants and four were consortium grants. For each consortium grant, one college was designated as the lead college, and the remaining were member colleges in the consortium. The evaluation team visited the lead colleges and one member college for each consortium. The consortia varied in size, from six members in the Better Occupation Outcomes with Simulated Training (BOOST) consortium to 17 member colleges in the Intentional Networks Transforming Effective and Rigorous Facilitation of Assessment, Collaboration, and Education (INTERFACE) consortium. In addition, some consortia included member colleges from a single state, while others were spread across multiple states. These differences all had implications for the organizational structure of the local projects.

For all the lead colleges visited, grant directors and their staff coordinated with their member colleges. In the case of consortium grants, grant directors at the lead colleges oversaw the consortia and coordinated with local project directors. (For more details on staffing, see section 3.6.) Staff at colleges that were consortium leads or single-institution grantees were required to participate in all training activities related to grant orientation, financial management and reporting, performance reporting, product dissemination, and other technical assistance training as appropriate during the grant period.

Consortium lead colleges had additional responsibilities, overseeing and managing the consortium-member colleges that operated local projects. These management responsibilities varied in complexity depending on the size and geographical reach of the consortium.

The consortium lead colleges were responsible for management activities, primarily providing direction and leadership over the design and implementation of the overarching grant activities and coordination with the local projects. Administrative duties included submitting quarterly programmatic reports and modification requests on behalf of local colleges in the consortium, communicating with DOL regarding grant matters, and tracking both the programmatic and fiscal/administrative progress of the grant. Lead colleges had to developed a collaborative model to reduce duplication of effort and resources across member projects wherever possible. Additional duties included developing and replicating curriculum across institutions. In some cases, the lead college designated one or more member colleges in the consortium to confer credentials, while other colleges focused on course development and delivery.

A common role of the lead college was to implement policies and procedures to be adopted uniformly across the colleges. Effective communication mechanisms were necessary to pass along information to local projects in different localities or states. Communication proved challenging for most, but not all, of the lead colleges. Staff from Midlands Technical College reported that they had good communication across member colleges; they held well-attended webinars involving member colleges from all three states in the BOOST consortium. Lead colleges used communications tools, such as Basecamp and Google Drive, to disseminate information to college partners.

Lead colleges also required consortium members implementing local projects to track and report participant data as part of the quarterly performance reporting process. Local project staff were responsible for overseeing budgets and managing day-to-day operations and tasks at their college. A common feature across member colleges was the autonomy to manage their own local projects, develop and implement programs of study within the targeted industry, and hire staff to meet their project needs. Hinds Community College received guidance and technical assistance from Lewis & Clark Community College (the lead college) but designed and managed their river-barge and truck-driving programs independently.

About half of the 14 colleges visited had some experience with TAACCCT grants from a prior round, either as a member college in a consortium or as a single-institution grantee. Some of these colleges used their previous experience to leverage knowledge of a content area (e.g., remedial education) to inform the programs they developed as a part of the Round 3 grant, and some leveraged their

experience with grants management. Some colleges without prior experience with TAACCCT sought out the insight and advice of college partners that did have previous experience with the grant program.

Several colleges used Round 3 grant funds to scale up existing projects started in prior rounds. For example, North Dakota State College of Science built on the college's experience partnering with a welding organization and local partner colleges in a previous round of TAACCCT to inform the implementation of their Round 3 manufacturing program. Northcentral Technical College District scaled up its information technology program using Round 3 funds. A Round 2 college that partnered with Northcentral Technical College District as a consortium member in Round 3 shared website designs, a budget template, a data dictionary, and communications plans to the college along with other best practices and lessons learned, saving Northcentral Technical College District's staff time and resources. Box 3.1 provides a more detailed example of a consortium grant that leveraged prior TAACCCT experience to improve grant management.

The organization and structure of the grants also led to some challenges with launching and implementing the colleges' local projects. The most frequently cited planning challenge was the delay in the approval of the budget and project activities, which caused some employers to back out of their support of a college's local project due to the lag in the approval process. This was especially problematic for lead colleges of consortia, who had to wait until each plan for local projects was approved before activities could commence.

BOX 3.1

Colorado Community College System Leverages Experience from Previous TAACCCT Grant

The Colorado Community College System, which managed the Colorado Helps Advanced Manufacturing Program (CHAMP) consortium with Front Range Community College, built off its experience with a Round 2 grant to more effectively manage the Round 3 grant. Although the industry focus was different between the two rounds (energy vs. manufacturing), accomplishments under Round 2 informed implementation of the Round 3 project. The Round 2 grant funded a major redesign of developmental education in the community college system to prepare participants for career and technical education. This reform reduced the amount of developmental coursework participants needed before starting college-level work, meaning participants could progress through their programs of study more quickly. In addition, some staff members had the benefit of prior experience under TAACCCT. The CHAMP consortium grant director had been a local project lead at a Round 2 college, and the Front Range Community College project director was involved in a Round 1 grant.

Source: TAACCCT Round 3 Urban Institute site visits, 2017.

Some lead colleges across the consortia sites mentioned that policies and procedures communicated to each of the member colleges in the planning process were not always implemented in uniform or desired ways. Consortium-lead colleges sought to overcome this challenge by convening all local projects to discuss common practices and providing email updates about critical information to help streamline communication. In general, single-institution and consortium grantees with prior experience running local projects tended to leverage the lessons learned from that experience and anticipate challenges to the extent possible. Colleges worked to resolve these challenges by developing partnership agreements with external partners during the delay in budget approval so that programs were set up and ready to launch once activities were approved.

Furthermore, some colleges reported that having additional time during the planning period to effectively design programs of study and curricula and establish partnership agreements would have been beneficial. Colleges that established for-credit programs that required a formal curricula approval process found that it was more difficult and time-consuming than anticipated. For example, Northcentral Technical College District noted that the evolution of the target industry (information technology) from the time of the writing of the grant application process through the planning phase necessitated changes and upgrades to the program so that it would be better aligned with employer demand and the current state of the industry.

3.2 Curriculum Development

All of the colleges visited embarked on a curriculum development process as a part of their TAACCCT grants.[35] Most colleges spent a significant part of the planning phase creating rigorous curricula that would be engaging to participants and responsive to the needs of employers. For example, instructors from Wallace Community College Selma visited classes and spoke with instructors at other colleges before developing their new curriculum. Project staff reported that they wanted to ensure that the curriculum was aligned with skills required to be certified and employed in the field. For example, Hinds Community College modified their curriculum so that it was aligned with industry certification tests. As a part of the Front Range Community College grant, the Colorado Community College System office used an instructional designer to develop courses for the consortium. Curricula were created with

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[35] The survey did not ask about the curriculum development process for colleges but it did ask about the strategies developed as a part of the curriculum such as work-based learning or contextualized instruction, which is discussed in chapter 5.

feedback from instructors, advisory boards, and representatives from industries and were based on the skills and knowledge their participants would need in the industry of focus.

Several of the colleges adapted or modified curriculum from other program and learning contexts. North Dakota State College of Science also modified existing curriculum materials by asking employers what skills they required of their employees and asking the advisory committee for help making sure the curriculum was up to date. Most of their curriculum was based on the equipment—the instructors turned the user manuals into teaching guides, as learning how to operate the equipment was a significant part of the program. At North Dakota State College of Science and Madison College, national certificates were embedded in the curriculum so that participants could obtain their certificates immediately after mastering the content (while still in the program).

Most colleges incorporated online learning into their curriculum. For example, Northcentral Technical College District created 150 new courses, including a basic massive open online course in both Spanish and English for use by anyone across the world. They also put the curriculum on a flash drive so that it could be used in prisons, where there was no internet connection. Courses had to be revised every year because the tools and focus of the information technology industry was changing rapidly.

While most colleges offered some courses online, they also designed classes to be delivered in person or blended (i.e., a mix of online and in-person instruction), as hands-on practice was integral to the programming. At many colleges, such as Missouri State University-West Plains, only technology-related programs had online classes; the health information technology program had online courses but agriculture did not. At Lewis & Clark Community College, welding homework and notes were online, but lectures and training on equipment were held in person. Most colleges published notes and PowerPoint slides online so that participants could review the material later.

At Midlands Technical College and Wallace Community College Selma, there were no online classes because the curriculum was centered on gaining hands-on practice to develop clinical skills. Employers requested that the curriculum include soft skills, communication, ethics (e.g., Health Insurance Portability and Accountability Act and privacy), and computer skills. Health care participants used in-person classes to practice their communication skills and "bedside" manner with patients and demonstrate timeliness. Midlands Technical College staff reported that hands-on courses positively benefited learning, as "the creative curriculum has impacted participant success overall. When the college implements things that appeal to more learning styles, they increase success and retention."

Instructors have real-world experience. They have the knowledge to say, 'This is what you do, and this is why you do it this way'" They can modify problems from the book to reflect real life scenarios.

— TAACCCT Participant

3.3 Training Facilities and Equipment

Colleges could use grant funding to improve and equip existing training facilities to support programs of study in industries of focus.[36, 37] Overall, 12 of the 14 colleges visited purchased new, specialized equipment to support hands-on instruction for their programs. Multistate consortia used grant funds to support similar purchases across the local projects that would advance instruction in targeted industry sectors. For example, the transportation, distribution, and logistics program at Lewis & Clark Community College purchased heavy-duty equipment, including a truck, trailer, and simulator. Midlands Technical College and Wallace Community College Selma purchased high-fidelity manikins so that participants could learn and practice patient care techniques in the simulation centers. Colleges focused on information technology—Northcentral Technical College District and Community College of Baltimore County—upgraded their labs and classrooms with laptops, computers, and software to support instructional programs, ranging from basic computing skills to cybersecurity. Colleges that focused on advanced manufacturing—Mesa Community College, Missouri State University-West Plains, North Dakota State College of Science—purchased expensive, state-of-the-art equipment and machine tools—including mills, lathes, robotics, and welders—which enabled hands-on instruction.

Project staff reported that the investments in equipment increased the level of instruction for their programs, giving participants access to the machines and tools that they will need to transition from the classroom to the workplace. Staff also thought providing less expensive equipment to support training success, such as lab supplies, uniforms, or iPads for participants who lacked computers to use during

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[36] The survey did not ask about the facilities and infrastructure but it asked about the strategies developed in the programs of study and support services that used the new and updated facilities and infrastructure, as discussed in chapters 5 and 6.

[37] Colleges could use grant funding to purchase new equipment and upgrade existing facilities but could not use funding to build new structures.

their program, was also important. Box 3.2 highlights the perspectives of project directors on the importance of being able to purchase new equipment and upgrade facilities with the grant funding.

Eleven colleges reported that partners, and particularly employers, had played a key role in upgrading facilities and equipment. Six colleges reported that their partners provided advice about the types of equipment to purchase; two projects received steep discounts on the purchase of equipment. Employers and advisory committees working with North Dakota State College of Science provided significant input and helped to identify "the best equipment for the best price." A partner with the INTERFACE project donated old computers for participants to take apart and reassemble. The truck-driving company affiliated with the Hinds Community College project purchased the land and built the school where the training academy was held, and bought the equipment (including simulators). A health care simulation firm that partnered with the BOOST consortium gave the colleges access to a database of computerized simulations. This enabled large numbers of participants to experience individual and group simulation in exercises led by teachers and to take rigorous, competency-based assessments. Other leveraged resources included donations of employers' time (Community College of Baltimore County) and materials and scholarships (Front Range Community College).

3.4 Funding and Leveraged Resources

DOL awarded up to $500 million in grant funding for each of the four rounds of the grant program. Funding guidelines for Round 3 allocated approximately $474 million overall to grantees, with as much as $150 million allocated for all single-institution grantees, and up to $324 million for consortium grantees. Like previous grant rounds, the Round 3 guidelines stipulated varying funding amounts for single institutions (between $2.37 and $2.75 million) versus consortium grantees (up to $25 million).[38]

The portion of grant awards that individual colleges (single-institution grant colleges, consortium-lead colleges, and consortium-member colleges) received varied across institutions. In Round 3, the colleges surveyed received an average of $2.5 million funding, ranging from $108,324 to $25 million.[39] Single-institution grantees received only slightly higher funding than consortium-member colleges on average, receiving $2.6 and $2.5 million, respectively. However, the proportion of funding received by individual colleges within consortia varied considerably, depending on whether those colleges were consortium leads or member colleges. In Round 3, the average consortium lead college received $6.1 million, whereas the average member college received just under $2 million.[40]

In addition to the grant funding, the 14 colleges visited leveraged multiple funding streams to augment their grant funding, including state and federal programs. They used in-kind resources from their institutions and partners. For all colleges visited, grant funds were the primary sources of support to implement their programs of study. Some colleges that supported degree programs received additional funding from their colleges, through state funds and tuition. For example, the Community College of Baltimore County provided an additional $540,000 to complete the cybersecurity program's equipment expansion. Noncredit programs held at Front Range Community College and Long Beach Community College did not receive any additional internal or state funds and had to be self-supporting.

State grants provided additional financial resources to some local colleges. For example, the Delta Regional Authority funded the renovation of the Greater Ozarks Center for Advanced Technology building for Missouri State University-West Plains to build and implement its manufacturing and alternative energy programs. Additional resources leveraged to get the Greater Ozarks Center for

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[38] The minimum and maximum Round 3 allocations for single institutions were slightly lower than in Rounds 1 and 2. In contrast, the maximum allocation for consortium grantees was slightly higher in Round 3 (at $25 million), compared with Rounds 1 ($20 million) and 2 ($15 million).

[39] In comparison, the average award for Rounds 1 and 2 colleges responding to the survey was lower, at $1.63 million, and ranged from $22,216 to $15 million.

[40] In Round 1, average grant awards for consortium leads were $3 million, versus an average of $1.1 million for consortium members.

Advanced Technology building up and running included the deployment of AmeriCorps National Civilian Community Corps members to frame, put up dry wall, and paint the interior and exterior.

Several local colleges benefited from use of in-kind resources provided by their colleges and partners, including goods, services, and staff time. Some colleges provided estimates of the value of leveraged resources, ranging from $100,000 in project staff salaries for Lewis & Clark Community College to $10 million per year for participants' tuition, the new training facility, simulators, trucks, fuel, and some salaries from the trucking employer for Hinds Community College.

In leveraging financial resources, colleges expanded their relationships with partners, including industries and states. As one project director noted, "having grant dollars in hand opens company doors and wallets." Employer and industry partners made donations of new and used equipment to support training and provided scholarship funds. Colleges also leveraged other workforce development grants from states, foundations, and industry. Mesa Community College, for example, received $495,000 from multiple sources, leveraging the resources of the state, foundations, industries, and corporations to augment the resources of the local project, and support common objectives to train the local workforce in high-demand jobs. North Dakota State College of Science leveraged $400,000 from the state, and it was matched by industry partners.

3.5 Faculty and Staff

A major activity of the colleges, especially in the early part of the grant, was hiring staff or identifying existing college staff to lead or support the grant activities. All but one of the project directors of the colleges visited were already employed at their college. At Madison College, the department head served as the project director, and at North Dakota State College of Science, the project director was already a faculty member. College leadership noted that having directors who were current employees of the college helped with the planning stage. These project directors were already familiar with the college's needs and had existing positive relationships with instructors. Missouri State University-West Plains was the one college that hired an external project director.

Colleges either hired new instructors or reassigned currently employed faculty and instructors to teach courses. For example, Madison College hired one additional staff member to join existing staff from the business and information technology departments that had been brought on to teach grant-funded courses. At Wallace Community College Selma, existing nursing program instructors were reassigned to new electrocardiogram and phlebotomy certificate programs funded by the grant.

Career navigators and coaches were also important staff for the grant activities. Staff at every college stressed the importance of career advising or counseling to their participants' success in the classroom and in finding post-program employment. Most colleges hired a career navigator or coach to fill this role, rather than give this role to faculty or instructors. North Dakota College of Science was the exception, assigning a faculty member to serve as a career advisor.

Whether they were new hires or existing college staff, several colleges offered professional development or orientation to the new programs of study or grant activities, especially for faculty and instructors. The Colorado Community College System office and Pikes Peak Community College, both part of the CHAMP consortium, provided training focused on instructional design, pedagogy, and curriculum so that instructors, who were content specialists, could implement new educational resources and technologies, such as massive open online courses. University of Vermont also invested in professional development training for instructional design support. Missouri State University-West Plains held a training for faculty to use the equipment in the computer lab for the medical billing and coding program. Most colleges held monthly meetings to communicate with faculty and provide training on equipment.

"The more the instructor goes to professional development classes, the more content is rolled into the students' curriculum and training."

– Project Director

Sustainability of the positions created by the grant was important to some colleges. Because Hinds Community College did not have new hires, staff were able to create a sustainability plan that included all of the faculty that worked on the grant. University of Vermont and Midlands Technical College also gave college administrators grant responsibilities in addition to their current work. While this was overwhelming at times, it meant that the administrators already understood college procedures and that their leadership over the program would continue after the grant was over. Northcentral Technical College District leadership noted that staff who were fulltime employees and had worked at the college previously had more of a commitment to the program and an investment in its success, which led to higher retention rates. According to staff across the colleges, implementing the grant was a tremendous task that took the dedication and drive of talented instructors, staff, and administrators. However, they

saw that successfully implementing these programs would have lasting benefits to participants, employers, and the college community and was worth the time and energy.

3.6 Processes for Monitoring Participant Progress

The grant announcement for Round 3 required that all grantees track and report data on participants, which necessitated the creation of a new data tracking system or the leveraging of existing institutional resources. Grantees had to track and report outcome measures for all program participants, including the number of participants and completers, graduation rates, employment rates, transfer rates, and average earnings of completers. The goal of tracking these data was for the colleges to have a way of measuring their program progress and participant success. This could help them make data-driven decisions about how to improve their programs, and to ensure that all program participants were receiving the support they needed to successfully complete their courses of study.

For some colleges, tracking participant progress and program outcomes was a new expectation that necessitated purchasing new software, developing new databases, and/or conducting staff trainings on how to collect and track data. For example, Midlands Technical College began tracking outcome measures using spreadsheets and soon found that after the first cohort, this system was not adequate for tracking the progress of new enrollees and enrollees from the past semester. As participants took different paths, such as fast tracking their course of study, going to school part time, or transferring to another institution, the amount of data Midlands Technical College had to collect exponentially increased. Midlands Technical College then purchased and modified a software package for all local colleges in the BOOST consortium to help with data tracking and reporting. Using a common software also ensured consistency in the outcome measures being collected across member colleges. Tracking data was a paradigm shift for Midlands Technical College, but once staff were trained, they reported that they hoped to continue the practice, and wished that they had purchased the packages earlier.

For other colleges, tracking data was an institutional practice already in place, and DOL definitions and outcome measures were merely incorporated into the existing systems. For example, Hinds Community College, the INTERFACE consortium in Wisconsin, and the CHAMP consortium in Colorado relied on their respective institutional research divisions to track and report on outcomes to the college. The offices of institutional research (either located at the college or at the state office overseeing community and technical colleges) played a key role in putting the quarterly reports together. Leveraging the expertise and experience these offices proved crucial to meeting the expectations of the grant.

Regardless of their familiarity with progress monitoring and outcome tracking, most colleges reported relying on their third-party evaluator for help with interpreting definitions, such as who counted as a participant and/or a completer as well as how to apply the definitions to ensure consistency and accuracy in data collection and analysis. Besides assisting project directors with the creation and distribution of quarterly reports, third-party evaluators helped introduce colleges to the culture of data and evaluation. As one administrator explained, "it's the biggest learning tool. Our evaluators made evaluation a household name [here]. People thought evaluators were compliance officers, but now they realize they're their best friend."

Combined with data on industry shifts and employer needs, participant data allowed the colleges to make data-driven decisions that would help sustain the program and benefit participants, employers, and the community. Except for Wallace Community College Selma, who published its outcome data on their website, and North Dakota State College of Science, who shared the data with its state legislature, most colleges only shared quarterly reports internally. Lead colleges generally shared consortium-level information among all members of the consortium and then provided each local college with reports on their participants. Project staff discussed the reports at meetings with college leadership and the advisory boards to reflect on successes, areas of improvement, and to make decisions on program direction.

4. Participant Recruitment, Enrollment, and Progress

An important component of the grant activities was recruiting and enrolling participants in the grant-funded programs. Round 3 colleges targeted different groups of adult learners for grant-funded programs of study, conducting a variety of outreach and recruitment activities to ensure they enrolled sufficient numbers of participants, per the requirements of the grant. The colleges also had eligibility requirements such as having a high school credential or taking a college entrance exam. Colleges, as a part of their grants, also had to track the progress of their participants including credentials and credits earned, program completion, continuation into another program of study, and employment. This chapter describes the adult learners that colleges targeted for grant-funded programs of study, the recruitment and outreach efforts used by the colleges, and the eligibility requirements and enrollment processes for participants based on the survey and fieldwork. Participants also provided their perspectives on the recruitment activities and enrollment processes via focus groups conducted during site visits. Finally, the chapter presents the progress participants made toward their educational attainment and employment goals.

These are key findings from this chapter:

- Across the colleges surveyed, the most commonly targeted groups for their programs of study were unemployed individuals/dislocated workers and veterans. At least three-quarters of all colleges actively recruited underemployed workers, TAA-eligible workers, low-income/disadvantaged individuals, long-term unemployed individuals, entry-level workers, and individuals lacking job-related skills or with low education levels. The economic recovery following the Great Recession resulted in a limited pool of TAA-eligible workers for most colleges visited, meaning that most participants were not TAA-eligible workers.

- Commonly used methods of outreach and recruitment by the colleges surveyed (over 80 percent) 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 (e.g., at schools, neighborhood centers, libraries); and websites.

- Many of the colleges visited targeted veterans for their local projects and already had processes and partnerships in place for conducting outreach to and successfully recruiting veterans, active military, and military families.

- Although the colleges recruited adult learners using a variety of methods, such as targeted advertising and direct community outreach, several colleges visited experienced difficulties recruiting women and minorities.

- Participants in the focus groups most commonly learned about the grant-funded programs through word-of-mouth from other students and coworkers, referrals from employers, recruitment by project staff during programs or classes not funded by the grant, public advertisements, and referrals from partners, such as the public workforce system.

- Over four-fifths of the colleges surveyed required non–TAA eligible participants to have a high school diploma or general education development (GED) certification. Some colleges visited did not require high school credentials for their programs, such as shorter-term programs that were aimed at improving the skills of incumbent workers or programs that incorporated an integrated instructional strategy. Additionally, slightly more than half of colleges required completion of college entrance exams.

- Most colleges visited did not have eligibility criteria that was different from their enrollment requirements for similar programs, except for some accelerated, noncredit certificate programs aimed at incumbent workers. Some colleges required applicants to meet with project staff before enrolling to ensure they fully understood program requirements and signed up for the correct courses. Programs developed for specific employers required participants to meet occupational eligibility standards, such as passing drug tests, passing physicals, or being a certain age.

- The greatest barriers to recruitment and enrollment reported by the colleges surveyed included: conflicts between work and school hours, difficulties with identifying and finding eligible participants, and low or inadequate basic skill levels of applicants.

- Many of the participants who took part in focus groups indicated that were already enrolled in the college when they were recruited, and heard about the program from a presentation in class or from an instructor, advisor, or fellow participant. A few participants stated they did not realize they were in a grant-funded program until after they had been enrolled or asked to fill out a TAACCCT participant intake form. Some participants became aware of the programs while finishing high school because of outreach by the colleges (e.g., presentations or coordination with guidance counselors). Others found out from staff at other postsecondary institutions or through GED instructors. Participants also mentioned learning about their programs from colleges' websites or emails.

- Participants cited many reasons for deciding to enroll in the grant-funded programs including: the ability to earn credentials for one occupation while working toward a degree for a more advanced occupation; class schedules that accommodate work or family obligations; desire to gain new skills or change careers; interest in the subject matter or type of work; need to upskill for current employer or to get a different/better job in current field; and opportunity to earn a credential, certificate, or degree at an accelerated pace.

- Across the colleges surveyed, they enrolled an average of 423 participants in grant-funded programs. Participants made progress in their programs and many of them experienced successful educational outcomes. Fewer had experienced successful employment outcomes at the time of the survey, as it can take longer to realize employment goals and there is generally a lag in employment data.

4.1 Target Populations

The Round 3 grant announcement stated that the grants were meant to fund education and training "suitable for a diverse population of workers eligible for training under the TAA for Workers program, as well as a broad range of other adults, such as women or minorities who may be underrepresented in high-demand fields." It also stated that TAA-eligible workers must be given priority for the programs of study. Within these guidelines, the Round 3 colleges targeted a range of adult learners with varying degrees of success, subject to factors such as the presence of TAA-eligible or other dislocated workers in the area, population demographics of surrounding areas, proximity to military installations, and local labor markets.

As shown in figure 4.1, the Round 3 colleges were most likely to recruit unemployed and dislocated workers and veterans (91 percent). Furthermore, at least three-quarters actively recruited and targeted groups in the following categories: underemployed workers, TAA-eligible workers, incumbent workers, low-income/disadvantaged individuals, long-term unemployed individuals, entry-level workers, and individuals lacking job-related skills or with low education levels. More than 70 percent of colleges targeted women and racial and ethnic minorities, as encouraged in the grant announcement. A lesser but still significant percentage of colleges targeted men, older workers, people with disabilities, Unemployment Insurance claimants, immigrants/refugees/first-generation Americans, individuals with limited English proficiency, and ex-offenders/court-involved individuals.

Figure 4.1 also shows that grant funding provided colleges with an opportunity to reach out to new groups of adult learners. As shown in the figure, the percentage of colleges actively recruiting or targeting each of the groups increased, and in some instances, the percentage of colleges targeting specific subgroups because of Round 3 funding doubled (or more). For example, 45 percent of colleges targeted unemployed/dislocated workers prior to receiving their Round 3 grant, but 91 percent of colleges did so for their grant-funded programs.

The most commonly targeted groups by the colleges visited were veterans, underemployed workers, unemployed individuals, incumbent workers, and low-income individuals. (See box 4.1 for a more detailed example of a college targeting veterans.) Ten of the 14 colleges directly targeted veterans. Seven colleges reported targeting underemployed workers, and six colleges reported targeting unemployed workers. Four colleges targeted incumbent workers, individuals that were employed but in need of training to upskill for advancement along their career path. Most of the colleges reported that their local projects served populations similar to those they usually serve, and a majority served at least some participants straight out of high school as well as other traditional age (18–23) college students.[41]

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[41] Recruitment of high school students by the colleges is conducted outside of TAACCCT-funded activities.

FIGURE 4.1

Types of Individuals Actively Recruited or Targeted by Round 3 TAACCCT Colleges and Whether Group Was Previously Recruited or Targeted Prior to the Grant

% of responding TAACCCT colleges

■ Active recruitment prior to TAACCCT grant ■ Active recruitment for TAACCCT grant
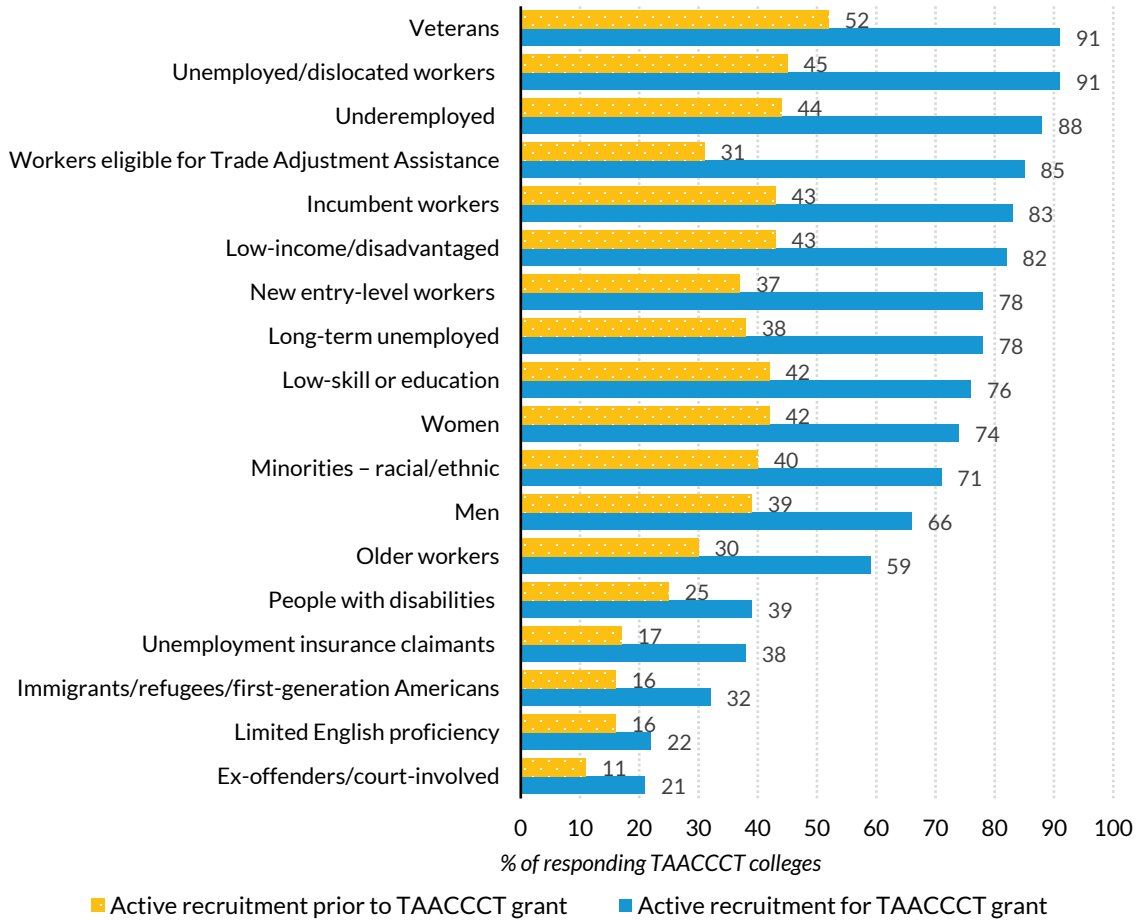
Source: Urban Institute survey of Round 3 TAACCCT colleges, 2016–17.

Notes: N=183; four missing colleges. Percentages do not add to 100 percent. Respondents could provide more than one response.

Targeting Veterans for TAACCCT Programs of Study

Many of the colleges visited specifically targeted veterans for their grant-funded programs. Several colleges had a history of serving active-duty military and veterans prior to the grant due to their proximity to military installments. Some colleges already had veterans' offices on campus or were already partnering with community organizations that serve veterans, and these offices and organizations recruited and referred veteran participants.

Project staff also employed additional strategies to target and recruit veterans for enrollment. Pikes Peak Community College employed a military and workforce outreach coordinator as part of their grant staff, who was familiar with veterans' organizations and initiatives in the area and could explain the advantages of working with veterans to employers. Similarly, Community College of Baltimore County hired an active-duty military veterans coordinator during the grant period, and the grant's outreach coordinator worked with her to directly recruit individuals exiting the military. Northcentral Technical College District made prior learning assessment (PLA) a focal point of their efforts to attract veterans to their TAACCCT project. They included PLA information as part of their veteran stakeholder meetings and military-targeted recruiting posters. Hinds Community College targeted veterans with advertisements that included the phrase "hiring our heroes." (More information about recruitment strategies are provided in chapter 4.)

Source: TAACCCT Round 3 Urban Institute site visits, 2017.

Although the grant announcement required recruitment of TAA-eligible workers, nearly all colleges visited reported low numbers of TAA-eligible workers in their service areas, with only one college (Missouri State University-West Plains) reporting success in identifying and recruiting dislocated and TAA-eligible workers. Colorado Community College System staff administering the CHAMP grant reported that, while they were not serving TAA-eligible workers in Colorado, the consortium colleges were serving a lot of "TAA-like" individuals (i.e., older, displaced, or underemployed workers). Half of the colleges visited directly targeted women, including older women and single mothers, and three colleges specifically targeted minority populations.

4.2   Recruitment Activities

In responding to the survey, Round 3 colleges reported using a range of outreach and recruitment strategies to expand awareness of grant-funded training activities within the college and in the area served by the institution. Colleges used many of the same recruitment methods typically used by any community college and other training providers to advertise training offerings. As shown in table 4.1, over four-fifths of colleges relied upon the following outreach and recruitment methods: distribution of posters or other self-produced educational/informational materials; referrals from the workforce

system; partnerships with employers and industry associations; in-person presentations at locations in the community, including schools, neighborhood centers, and libraries; and websites.

Outreach and Recruitment Strategies Used by Round 3 TAACCCT Colleges

Type of Outreach/Recruitment Strategy Used	% of Colleges
Distribution of flyers, posters, or other self-produced educational/informational materials	93%
Referrals from the workforce system	92%
Partnerships with employers and industry associations	91%
In-person presentations in the community (e.g., at schools, neighborhood centers, libraries)	89%
Informational websites	82%
Media outreach campaigns (e.g., TV, radio, newspapers, professionally prepared ads on buses/bus shelters)	72%
Referrals from community- or faith-based organizations	56%
Direct mail campaigns	40%
Door-to-door outreach	8%
Toll-free information hotlines	2%

Source: Urban Institute survey of Round 3 TAACCCT colleges, 2016–17.
Notes: N=184; three missing colleges. Percentages do not add to 100 percent. Respondents could provide more than one response.

Of the leading strategies, the strategies rated the most effective by colleges (among colleges using a particular strategy) were partnerships with employers and industry associations (73 percent) and in-person presentations in the community (66 percent).[42] Other strategies most often used for outreach were not as highly rated, including referrals from community or faith-based organizations (44 percent); distribution of flyer/posters (39 percent); informational websites (37 percent); and media outreach campaigns (36 percent).

Among the Round 3 colleges, the three greatest challenges and barriers to recruitment and enrollment included applicants' conflicts between work and school hours, difficulties identifying and finding eligible participants, and low or inadequate basic skill levels of applicants (see table 4.2). Some colleges also saw applicants' lack of child care, insufficient referrals from partner community organizations, insufficient referrals from partner(s) in the workforce system; and participants' lack of access to reliable transportation as a challenge or barrier to recruitment.

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[42] Effectiveness of recruitment techniques is not shown in the table; see appendix E for more details. A higher percentage of Round 3 grantees used media outreach campaigns, compared to Rounds 1 and 2. See appendix E for a comparison of Rounds 1, 2, and 3 survey results with respect to outreach strategies, as shown in table 4.1.

TABLE 4.2

Outreach or Recruitment Challenges and Their Level of Severity as Rated by Round 3 Colleges

Type of Outreach/Recruitment Challenge	# of Colleges Responding to Question	# of Colleges Rating Factor as Great/ Somewhat of a Challenge	% of Colleges
Participant-related challenges			
Conflict between work and school hours	183	109	60%
Difficulties with identifying and finding eligible participants	182	90	49%
Low or inadequate basic skill levels of applicants	183	79	43%
Participants' lack of childcare	183	74	40%
Participants' lack of access to reliable transportation	183	70	38%
Tuition cost	183	61	33%
Institutional challenges			
Insufficient referrals from partner community organizations	184	74	40%
Insufficient referrals from partner(s) in the workforce system	183	73	40%
Changing economic and labor market conditions that don't align with programs of study offered	179	67	37%
Negative perceptions of or a lack of interest in occupations by potential participants	183	57	31%
Insufficient referrals from partner employers or employer organizations	184	56	30%
Insufficient resources devoted to outreach and recruitment	184	51	28%
Lack of effectiveness of selected outreach strategies	183	35	19%

Source: Urban Institute survey of Round 3 TAACCCT colleges, 2016–17.
Note: Total number of colleges surveyed is 187; respondents could indicate for each factor that it was a great challenge, somewhat of a challenge, a minor challenge, not a challenge, or not applicable. A very small number of colleges did not provide a response on each of the factors, therefore, the number of responding colleges for each question varies slightly (as shown in the second column).

Staff at the colleges visited reported conducting outreach to recruit participants in various ways. Project directors, career navigators, and outreach coordinators spent a significant amount of time conducting outreach in the earlier stages of implementation; much of this work shifted to helping participants find employment later in the grant period. Outreach activities included going to American Job Centers, social service agencies, and community organizations to talk directly to clients and leave program brochures of flyers; reaching out to employers that might be in interested in training to upskill their current employees; setting up tables at job fairs; engaging with the press to cover program events; hosting information sessions and open houses; setting up window displays on campus; and doing presentations at other schools or in other departments within the college. (See box 4.2 for an example of a grant that leveraged career events and job fairs for program recruitment.)

Staff and Activities for Recruitment at the CHAMP Consortium Colleges in Colorado

Front Range Community College and Pikes Peak Community College engaged in a variety of outreach and recruitment strategies to attract participants to their advanced manufacturing programs. Both colleges employed outreach coordinators as part of their key project staff. At Front Range Community College, the outreach coordinator worked together with the career navigator to recruit participants and connect participants with employers for work-based learning and hiring opportunities. At Pikes Peak Community College, the military and workforce outreach coordinator recruited from the large pool of active-duty military and veterans in the area, which allowed the project director more time to dedicate to employer outreach.

Additionally, these colleges created and leveraged career events as often as possible to raise awareness about the growth of advanced manufacturing in Colorado and the related training programs available on their campuses. This included having tables and booths at job fairs, attending career events and mixers for veterans, and networking and handing out business cards at advanced manufacturing–related collaborative work spaces. The colleges also leveraged National Manufacturing Day by hosting public events showcasing a variety of occupations and activities that fall under the umbrella of advanced manufacturing, such as robotics and 3D printing.

Source: TAACCCT Round 3 Urban Institute site visits, 2017.

The colleges visited promoted their grant-funded programs in press releases, on their websites, and in their newsletters and emails. Campus career or advising centers also helped refer participants to programs of study. College staff who already recruited from high schools included information on the grant-funded programs as part of their regular outreach to these students and guidance counselors. Both grant and regular college funds were used to advertise grant-funded programs in newspapers, on the radio, on television, and online (e.g., the college's website, LinkedIn, and Facebook). In one case (Hinds Community College), an employer partner funded advertising for a grant-funded program using cobranded materials.

Some colleges reported that their local grant projects strengthened partnerships with community organizations, public agencies, and employers, thereby increasing the colleges' ability to recruit or receive referrals from these sources. Several colleges felt the local projects increased their visibility and relationships in their community as well. Others reported that their college recruitment and outreach methods did not really change or expand as a result of the grant. One college (Pikes Peak Community College) had its grant-funded programs listed on the Workforce Innovation and Opportunity Act eligible training provider lists, which made the college eligible for serving the participants that had publicly-funded training vouchers.

Project staff worked with local companies, economic development agencies, American Job Centers, workforce development boards, social services agencies, community organizations, and their own colleges' public relations and administrative offices to recruit participants with varying degrees of success. No colleges reported engaging in a high level of coordination across multiple grant partners for outreach and recruitment purposes. Coordination of outreach and recruitment efforts generally took place across a handful of individuals at each college.

Most colleges worked with the public workforce system to identify TAA-eligible workers for the grant-funded programs with varying degrees of success. The University of Vermont also worked closely with its state's department of labor. American Job Centers made referrals to programs for TAA-eligible clients and other adults interested in job training for several colleges.

Veterans' affairs offices within the colleges, community organizations serving veterans in the community, direct outreach at military installations, and community events for veterans (such as career fairs) were sources of outreach to veterans. Several colleges already had outreach coordinators or other staff dedicated full or part time to veteran recruitment before the start of the grant. To attract veterans to the grant-funded programs, several colleges promoted credit for prior learning assessments for skills obtained through military experience.

Overall, colleges reported challenges recruiting women and members of racial and ethnic minority groups into their programs. To address this issue, some colleges that targeted women as potential participants held women-only classes for traditionally male occupational training (Front Range Community College); partnered with industry organizations serving women, such as Women in Manufacturing (Mesa Community College); used targeted advertising (Hinds Community College); recruited at places such as nail salons (Madison College); and leveraged female instructors for outreach to women (Long Beach Community College). Some colleges conducted outreach to individuals from racial and ethnic minority groups through targeted advertising and community outreach. Hinds Community College received small grants from the Walmart Foundation and Jobs for the Future to target women and minorities for training. The CHAMP consortium leveraged another statewide grant project focused on getting more women and minorities into nontraditional occupational fields, including advanced manufacturing.

Other methods for reaching target populations included working with social services agencies and community organizations to identify low-income or disadvantaged individuals that might be a good fit for the program. Midlands Technical College targeted participants that had originally enrolled in a nursing program but had dropped out. Madison College reported that they "meet the target populations

where they were" by conducting outreach in places such as grocery stores and churches. North Dakota State College of Science used a mobile trailer to target potential participants in more remote areas across the state.

Potential participants' responses to outreach varied. Some colleges reported that the benefits of recruitment activities seemed small, as it was time consuming, they had limited staff, and their participants seemed to be mainly participants who were already looking for a certain type of training program. While most colleges met or exceeded their target numbers for enrollment and two programs had waiting lists, several colleges struggled to fill their program slots. Those colleges cited factors such as improved economic conditions, a desire among potential participants to go to work instead of going to or staying in school to earn additional credentials, and difficulty recruiting participants with children during the summer as potential barriers. Wallace Community College Selma staff noted that some participants and their families did not always believe that additional education and certification would be beneficial to them.

4.3 Eligibility and Enrollment

As shown in figure 4.2, Round 3 colleges had a variety of enrollment requirements and screening tools for non–TAA eligible individuals interested in participating in their grant-funded programs. In Round 3, over four-fifths of colleges required non–TAA eligible participants to have a high school diploma or general education development (GED) certification. Some colleges did not require high school credentials for certain programs, such as shorter-term training that was aimed at improving the skills of incumbent workers or programs that incorporated an integrated instructional strategy (e.g., incorporating basic skills instruction with occupational training). Additionally, slightly more than half of colleges required completion of college entrance exams (such as Scholastic Aptitude Test, American College Test, and COMPASS), and a third (33 percent) required basic skills tests (e.g., Test of Adult Basic Education, Comprehensive Adult Student Assessment Systems, Balance Evaluation Systems Test) as a condition of enrollment for non-TAA participants. Less frequently used enrollment requirements (less than 20 percent of colleges) included: an intake interview, background check, drug test, and/or aptitude test.[43]

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[43] Compared to enrollment requirements in Rounds 1 and 2, a slightly lower percentage of Round 3 grantees required an interview. See appendix E for a comparison of Rounds 1, 2, and 3 survey results with respect to screening and enrollment requirements, as shown in figure 4.2.

FIGURE 4.2

Round 3 TAACCCT Enrollment Requirements and Screening Tools for Non–TAA Eligible Participants

% of responding TAACCCT colleges
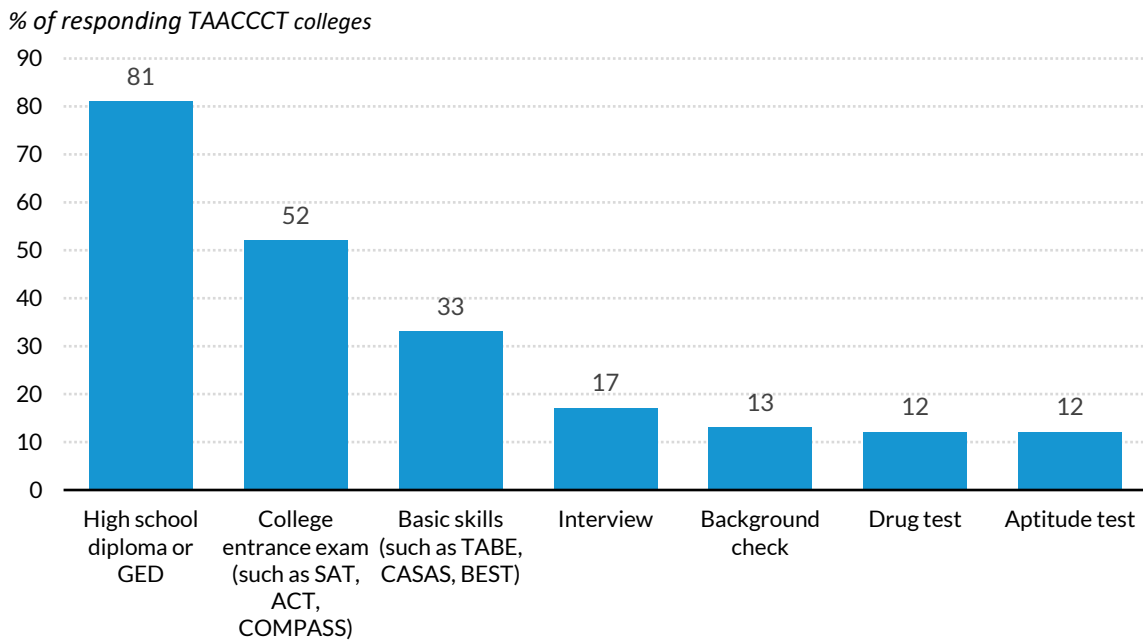
Source: Urban Institute survey of Round 3 TAACCCT colleges, 2016–17.
Notes: N=181; six missing colleges. Percentages do not add to 100 percent. Respondents could provide more than one response. SAT = Scholastic Aptitude Test. ACT = American College Test. COMPASS is a computerized test that helps colleges evaluate individuals' skills and place them in the appropriate courses. TABE = Test of Adult Basic Education. CASAS = Comprehensive Adult Student Assessment System. BEST = Basic Education Skills Test.

Most colleges visited did not have eligibility criteria that was different from their enrollment requirements for similar programs at their institution, except for some accelerated, noncredit certificate programs aimed at incumbent workers, which required a demonstration of the basic knowledge and skills needed to comprehend the program curricula. For programs in several colleges, participants had to demonstrate basic math or reading skills through placement tests; sometimes project staff waived the tests if they could verify adequate prior education or work experience. Some programs required completion of prerequisite courses prior to the enrolling in the grant-funded programs. Some colleges required potential participants to meet with project staff before enrolling to ensure they fully understood program requirements and signed up for the correct courses. A handful of programs did not require a high school credential to enroll if participants could pass placement tests. Programs developed for specific employers required participants to meet occupational eligibility standards, such as passing drug tests, passing physicals, or being a certain age (i.e., being at least 21

years old for truck driving). Some colleges reported that low-skill participants had trouble scoring high enough on math testing to qualify for training enrollment.

Many colleges required participants interested in enrolling in a grant-funded program to take standardized assessments to determine their educational readiness and need for remedial classes. The assessment processes varied across the local projects. Two colleges reported using ACCUPLACER, an integrated system of computer-adaptive assessments designed to evaluate participants' skills in reading, writing, and mathematics. Four colleges used COMPASS, a set of college placement tests to assess these skills. The truck-driving program at Hinds Community College used both ACCUPLACER and COMPASS. In addition to the COMPASS test, the BOOST consortium colleges also used a common assessment tool—Career Choice GPS—to identify participants' strengths and weaknesses.

For Long Beach Community College's construction, maintenance, and alternative fuels program, the assessment process was coordinated with a project partner, the Pacific Gateway Workforce Investment Network. This organization, which was a public workforce system entity recruited, screened, and provided case management and supportive services for all applicants, not only those eligible for Workforce Innovation and Opportunity Act programs. Network staff conducted the assessments at a testing center and reviewed employment status, educational background, and potential barriers. Long Beach Community College enhanced the readiness screening by adding questions about career/training goals and participants' exposure to the industry.

Other approaches used by colleges to assess educational readiness included skills testing at a boot camp for information technology (Madison College) and advanced manufacturing programs (Mesa Community College) and testing math skills for nontraditional students (University of Vermont). Other colleges relied on standard college assessment processes and made referrals to academic learning centers for participants to take remedial classes or receive tutoring (North Dakota State College of Science, Community College of Baltimore County). One local college did not have a formal assessment process in place.

During the focus groups, participants reported speaking with career navigators and coaches to understand program requirements. Preprogram meetings with advisors and instructors were often optional but allowed participants to learn about school resources, register for classes, and learn how the program could help them accomplish their career goals. While the tech-based programs offered preprogram boot camps to determine if participants had the requisite skills to participate, most programs were created to have few eligibility requirements. Participants could start shortly after signing up, making it an easy transition to the classroom.

4.4 Participant Perspectives on Recruitment and Enrollment

Focus groups conducted with Round 3 TAACCCT participants at 13 of the colleges visited provided a variety of perspectives on how participants heard about the grant-funded programs and why they decided to enroll. Often participants were already enrolled in the college, either in a different department or in the same department where the grant-funded programs were being implemented, and heard about the program from a presentation in class or from an instructor, advisor, or fellow participant. A few participants stated they didn't realize they were in a "TAACCCT" program until after they had been enrolled or asked to fill out a participant intake form that noted the program was funded by a DOL grant.

Participants found out about the grant-funded programs in other ways. Some participants became aware of the grant-funded programs while finishing high school due to outreach by the colleges (e.g., presentations or coordination with guidance counselors). Other participants were enrolled in dual-enrollment programs at the colleges while in high school and found out about the grant-funded programs through those programs. Others learned about the programs from staff at other postsecondary institutions or through their GED instructors. Participants also mentioned learning about their programs from colleges' websites or emails.

Growing up, I was mechanically minded, and everyone said I should be an engineer. I believed that, until I was 2.5 years into my [four-year] engineering degree program and realized there is a lot about engineering I don't like. [This program] has all the things I like from my engineering program, such as SOLIDWORKS [a 3D computer-aided drafting program]. I wish there were more kids that were aware they can build 3D models without getting an engineering degree.

— TAACCCT Participant

Outside of school-related recruitment methods, focus group participants heard about grant-funded programs through television and radio advertisements; flyers; signs on public transit; web searches for training programs or jobs; social media; friends or family members; coworkers or bosses; a church

pastor; job fairs; American Job Centers; and other career centers, including a "ready to work" program. Employers referred incumbent workers who were enrolled in programs developed for specific industry partnerships to programs of study.

Focus group participants cited many reasons for deciding to enroll in their respective grant-funded programs. Some of the more common responses included:

- the ability to earn credentials for one occupation while working toward a degree for a more advanced occupation;

- class schedules that accommodate work or family obligations;

- desire to gain new skills or change careers;

- interest in the subject matter or type of work;

- need to upskill for current employer or to get a different/better job in current field;

- opportunity to earn a credential, certificate, or degree at an accelerated pace;

- personal attention provided by the student navigator and other personal supports;

- programs including the skills and/or expertise on the equipment employers want;

- relevance of the program to opportunities in current or future job market; and

- support finding internships or employment.

Participants also reported very few eligibility requirements besides general math, reading, and writing skills, demonstrated through transcripts, placement testing, or program-specific assessments. For some information technology programs, participants had to pass basic computer comprehension assessments. In addition to basic skill demonstration, participants often had to meet with program staff prior to enrollment to make sure the program was a good fit for them. Some noncredit program participants mentioned having interviews with program staff to demonstrate they had the basic knowledge needed to participate in intermediate-level training and coursework. Incumbent workers had to meet the requirements of their employers for training, such as being on the job for a certain length of time before enrolling or getting a letter of recommendation from a supervisor.

4.5 TAACCCT Participants' Educational and Employment Progress

DOL tracked information on participants at the grantee level for performance reporting, which could be across multiple colleges for consortium grants.[44, 45] 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.[46] The section summarizes the progress Round 3 colleges made in enrolling participants and helping them complete their programs of study and find employment toward the end of their grant period, about 6-8 months before they ended in September 2017.

There are several caveats to the findings on participant progress. 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 4.3 shows the results to date on nine key outcome measures, presenting total number of participants and average number of participants per college. Across the Round 3 colleges, there were 65,612 total unique participants enrolled by the colleges as of the survey date. The average number of participants across the colleges was 423.

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[44] For more information from the Round 3 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.

[45] 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.

[46] 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.

TABLE 4.3
Progress Toward Participant Outcomes by Round 3 TAACCCT Colleges (6-8 Months prior to End of Grant)

Outcome Goals	# of colleges responding to question	Average # of TAACCCT participants
Total unique participants served/enrolled	155	423
Total number of participants who have completed a grant-funded program	151	150
Total number of participants still retained in their program of study or another grant-funded program	138	154
Total number of participants completing credit hours	125	296
Total number of participants earning credentials	135	175
Total number of participants enrolled in further education after grant-funded program of study completion	126	32
Total number of participants employed after grant-funded program of study completion	111	48
Total number of participants retained in employment after program of study completion	104	33
Total number of those participants employed at enrollment who receive a wage increase after enrollment[a]	110	55

Source: Urban Institute survey of Round 3 TAACCCT colleges, 2016-17.
Note: This measure refers to "incumbent workers."

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:

- 150 participants per college completing their grant-funded program;
- 154 participants per college still retained in their program of study or another grant-funded program;
- 296 participants per college completing credit hours;
- 175 participants per college earning credentials of any type; and
- 32 participants per college enrolled in further education after program completion.

Similar to the earlier rounds, 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 prior learning assessments to award college credit.

Table 4.3 also highlights the early employment results for participants. As of the survey date, these colleges saw:[47]

- 48 participants per employed after grant-funded program of study completion;
- 33 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 evaluations. These outcomes underestimate actual employment numbers due to the timing of the survey (before the grant ended) and the availability of employment data, for which there is often a lag.

While these data provide a snapshot in time for the Round 3 colleges, findings from the Round 4 outcome study will provide more detailed information on employment outcomes of participants at nine grantees. The study will also provide insight into the characteristics of TAACCCT participants, their experiences in the grant-funded programs, and their educational progress.

At the time of the visit, eight project directors of colleges that were the lead grant institutions—four consortia and four single institutions covering 12 colleges—reported positive participant outcomes that they attributed to the TAACCCT grant. For these colleges, educational attainment included the award of certificates and degrees along with receipt of industry-recognized credentials in high-demand occupations. These directors indicated that participants completed grant-funded programs with marketable skills and qualified for employment. Two colleges did not have information available regarding participant outcomes and were waiting for data to determine if these outcomes had been met. While institutional data were not available at the time of the visits, many projects predicted that there had been a positive change in graduation rates. Box 4.3 highlights the progress participants made during their enrollment in health care programs at Midlands Technical College.

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[47] 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.

Participant Outcomes as Midlands Technical College

Over the course of grant implementation at Midlands Technical College, staff indicated that enrollment in the three certificate programs—nursing assistant, phlebotomy, and cardiac care—was strong and steady. They also reported participants were completing the program and reaching their goals. After completing the BOOST program, some participants went to other technical colleges or the University of South Carolina, seeing BOOST as a stepping stone to elevate their career in health care. "BOOST provides them experience for entry-level jobs and confirms their desire to work in the field of health care."

Training in the grant-supported simulation center prepared participants in the nursing assistant program to prepare for the credentialing exam. Through the grant, Midlands Technical College became a regional testing center, with a special test date for participants, so participants (many of whom are low-income) could conveniently take the test without traveling. Taking the nationally recognized credentialing became a required part of the certificate program.

The skills that participants learned at Midlands Technical College were marketable in the workplace. "The short-term certificates also allowed students easy access to the field, so they could see if the health field is actually what they wanted to do and what type of work they wanted to do within the field. The certificates also helped students be more successful at entry-level jobs in the field." Midlands Technical College received feedback from employers that participants were confident in their skills and better prepared for the workplace because of the competency-based training, practice in the simulation center, and clinical experience. From the employers' perspective, hiring BOOST graduates meant there was less of a learning curve on the job for new certified nursing assistants. Midlands Technical College reported that 56 participants matriculated to a two-year program in nursing or health science after completing a BOOST certificate.

Source: TAACCCT Round 3 Urban Institute site visits, 2017.

5. TAACCCT Programs of Study

Through the TAACCCT grants, DOL sought to build the capacity of community colleges and encourage the development of career pathways through the creation of new or expansion of existing programs of study to be responsive to the needs of industry and adult learners. The grant announcement encouraged colleges to implement a range of education and training strategies to support their TAACCCT participants' success in the grant-funded programs. This chapter examines the strategies implemented by the Round 3 colleges to support accelerated learning, college persistence and completion, and connections to employment for their participants through their programs of study.[48]

These are the key findings from this chapter:

- The most common accelerated learning strategy among the Round 3 colleges surveyed was the creation of stackable or latticed credentials, a core element of the grants. When the colleges were asked what types of newly developed credentials they had implemented with their grant funding, nearly two-thirds reported the creation of certificates of completion for programs of less than one year's duration and a little more than half reported new professional/industry-recognized certifications. All 14 colleges visited implemented strategies designed to accelerate participant learning and advance participants along a career pathway. They also incorporated stackable and latticed credentials into their programs by offering multiple certificate or degree options that participants could earn over time.

- The colleges surveyed also used alternative scheduling, online/hybrid learning, and prior learning assessments to support accelerated learning. Most colleges, including the colleges visited, developed modularized courses to allow for more flexible course-taking for participants. Most colleges surveyed also implemented hybrid-learning strategies, whereby instruction is delivered both online and in person. All 14 colleges visited included online instruction in their grant-funded programs. Most colleges surveyed and visited offered prior learning assessments, either for credit or to place students in the appropriate level of classes.

- The colleges surveyed most often focused on articulation from grant-funded programs to more advanced ones, a key part of career pathways that could support college persistence and completion. Twelve of the colleges visited reported having agreements with other colleges and universities so that participants could transfer credits from the grant-funded program to a four-year institution. Other common strategies used across the colleges surveyed were competency-based education and contextualized learning.

- Of the education and training strategies to support connections to employment, the colleges surveyed most commonly provided internships and simulated learning experiences, important for helping participants master skills for current or future jobs. Eleven colleges visited provided internships for participants across multiple industries. Designed to incorporate hands-on learning on campus or online, simulation was another popular learning technique among the colleges visited, with 11 of the 14 developing simulated work settings as a part of their programs.

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[48] See chapter 1, figure 1.1 for definitions of the three overarching strategies.

- Overall, participants in the focus groups expressed high levels of satisfaction with the education and training opportunities they received through the colleges' programs of study. They cited the quality of instructors and opportunities for hands-on experience and potential employment as key reasons for recommending the program to others.

- For coursework that embedded accelerated learning strategies, participants needed to learn a lot in a short amount of time but reported having good tutoring and support from instructors and peers. Participant response to the fast pace, however, was mixed. Whereas many preferred the short duration of the program because it allowed them to return to the workforce quickly, other participants were interested in having more time to learn and process the new information. Condensing the materials over a short, intensive period of study made some participants feel as if they were cramming constantly.

- The most common challenge expressed by participants concerned conflicts between the program's schedule and work-life demands. Participants reported wanting greater flexibility with respect to classes and internships to fully partake in and benefit from the program and their studies. While some programs offered online courses and classes at different times to be flexible, for other programs, this was not feasible due to the need for equipment, instructor's schedules, or participants' lack of access to internet.

5.1 Strategies to Accelerate Learning

As shown in table 5.1, the most common accelerated learning strategy among the Round 3 colleges was the creation of stackable or latticed credentials, a core element of the grant program (see conceptual framework in chapter 1). 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 move the individual along a career pathway, while a credential is considered latticed if it connects to other career pathways. In addition to stacked and latticed credentials, more than half of colleges indicated that they used their grants to develop industry-recognized credentials and design new career pathway programs.[49]

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[49] The creation of stackable or latticed credentials, development of industry-recognized credentials, design of new career pathway programs, and articulation to more advanced programs were more prevalent career pathways strategies in Round 3 than in previous rounds. See appendix E for a comparison of Rounds 1, 2, and 3 survey results.

TABLE 5.1
Education and Training Strategies Implemented by Round 3 TAACCCT Colleges to Accelerate Learning

Accelerated Learning Strategy	% of Colleges
Credentialing and career pathways	
Creation of stackable or latticed credentials	84%
Development of industry-recognized credentials	65%
Design of new career pathway program	58%
Course scheduling	
Modular courses	43%
Self-paced learning	24%
Asynchronistic scheduling	19%
Technology-enabled learning	
Hybrid learning strategies	71%
Online teaching/learning	62%
Real-time, online instruction	14%
Prior learning	
Prior learning assessments	58%
Credits for prior learning or work experience	34%

Source: Urban Institute survey of Round 3 TAACCCT colleges, 2016–17.
Notes: N=182; five missing colleges. Percentages do not add to 100 percent. Respondents could provide more than one response.

DOL encouraged colleges to further develop or implement new credentials as part of their grant-funded programs, especially shorter-term credentials (one year or less) that were relevant to the industries targeted by colleges. When asked about the types of newly developed credentials they had implemented, more than half of the Round 3 colleges reported the creation of certificates of completion for programs of less than one year's duration and new professional/industry-recognized certifications (see figure 5.1). About one-third identified newly developed certificates of completion for programs of one to two years' duration and newly created academic degrees because of grant funding. Colleges also indicated they had made enhancements or adaptations to certificates of completion for programs of one to two years' duration, academic degrees, certificates of completion for programs of less than one year in duration, professional/industry certifications, and occupational degrees.[50]

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[50] Compared to Rounds 1 and 2, Round 3 focused more on newly developed credentials in three areas: certificates of completion for programs of less than one year's duration, academic degrees, and professional/industry certifications. See appendix E for a comparison of Rounds 1, 2, and 3 survey results.

FIGURE 5.1

Types of Credentials for Training Programs Developed or Enhanced by Round 3 TAACCCT Colleges
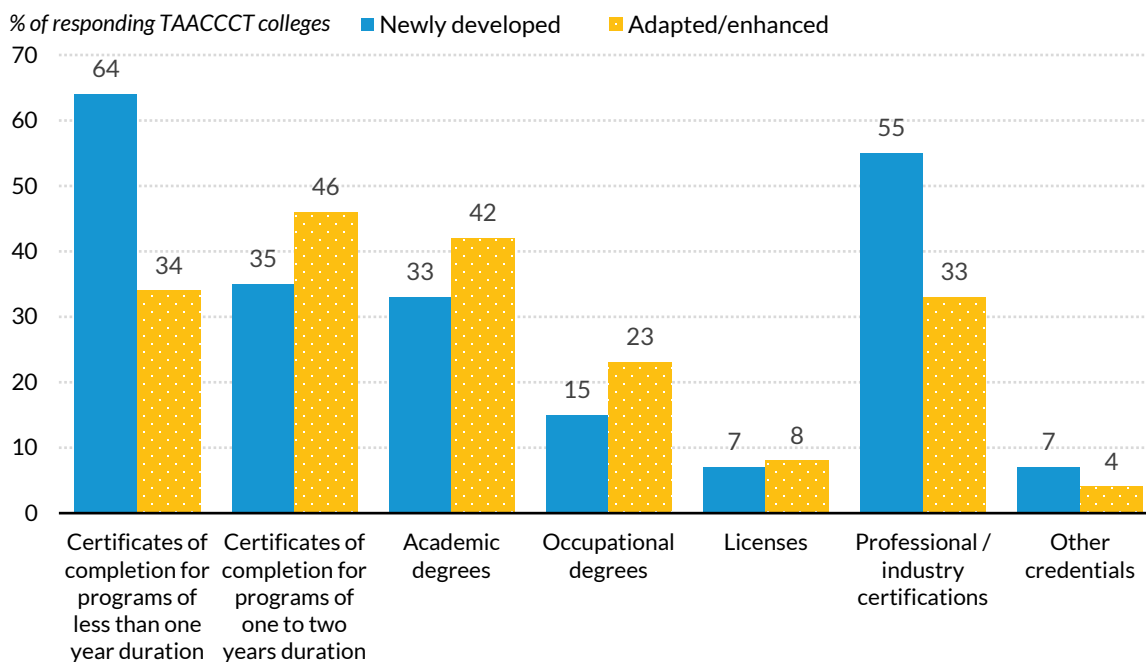
% of responding TAACCCT colleges ■ Newly developed ■ Adapted/enhanced

Source: Urban Institute survey of Round 3 TAACCCT colleges, 2016–17. Percentages do not add to 100 percent. Respondents could provide more than one response.

Note: N=181; six missing colleges.

All 14 of the colleges visited incorporated stackable and latticed credentials into their programs by offering multiple certificate or degree options that participants could earn over time. For example, at Lewis & Clark Community College, the welding program offered 11 different options for sets of classes leading to credentials, including a certificate of proficiency and 9 different certificates of completion requiring between 4 and 16 classes. An associate degree program was also available for participants who completed general education requirements.

Figure 5.2 below shows all the credentials participants could earn through the Arizona Advanced Manufacturing Institute at Mesa Community College, a combination of national industry certifications, certificates of completion, and associate degrees. Participants had the option to exit the program after completing a certificate, and then come back to complete the associate degree later as a part of a career pathway. A staff person explained, "Degrees have certain credentials embedded in it. They all feed into the degree. We don't want to do anything terminal. They can ramp on and ramp off, but we want them to get the degree."

FIGURE 5.2

Competency-Based Stackable Credentials at Mesa Community College

Source: Mesa Community College, 2017.

By offering stacked credentials and ways for participants to develop new skills to help them progress within an industry, the colleges supported participants in advancing along career pathways. Figure 5.3 below shows a graphic for the information technology program at Madison College and the various career pathways available. Participants could earn different combinations of certificates, technical diplomas, and associate's degrees, each of which opened different job opportunities within an information technology career pathway. The graphic shows how participants can "job out" (leave the pathway for employment) after any certification or continue with their education.

I'm going to get my certificate, then go work in the real world. Then I'll find my niche, and then I'm going to come back and finish out my degree. I talked to [navigator], and … he said, 'Any credits you get here, you keep. If you want to transfer to a university, you can.' That's what's good.

—TAACCCT Participant

Round 3 colleges used a variety of scheduling strategies to help accelerate learning for participants, as shown in table 5.1. Colleges most often developed modularized courses, which organize courses so that the concepts were taught in a series of modules or blocks that built upon each other. Other scheduling strategies self-paced learning and asynchronistic (varied) scheduling.[51] Ten of the 14 colleges visited used modularized courses within their grant-funded programs. Front Range Community College, for instance, had beginner, intermediate, and advanced modules for its machining program. North Dakota State College of Science offered modules developed by manufacturing automation company FANUC, machine tooling modules, and modules for American Welding Society certification. At Hinds Community College, the deckhand training program included a series of modules that each led to a mini-certificate. Topics included water safety, cardiopulmonary resuscitation, throwing lines, and tying knots.

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[51] Compared to enrollment requirements in Rounds 1 and 2, a slightly lower percentage of Round 3 grantees required an interview. See appendix D for a comparison of Rounds 1, 2, and 3 survey results.

FIGURE 5.3

Information Technology (IT) Career Pathways at Madison College

TAACCCT INTERFACE PROJECT – IT CAREER PATHWAYS
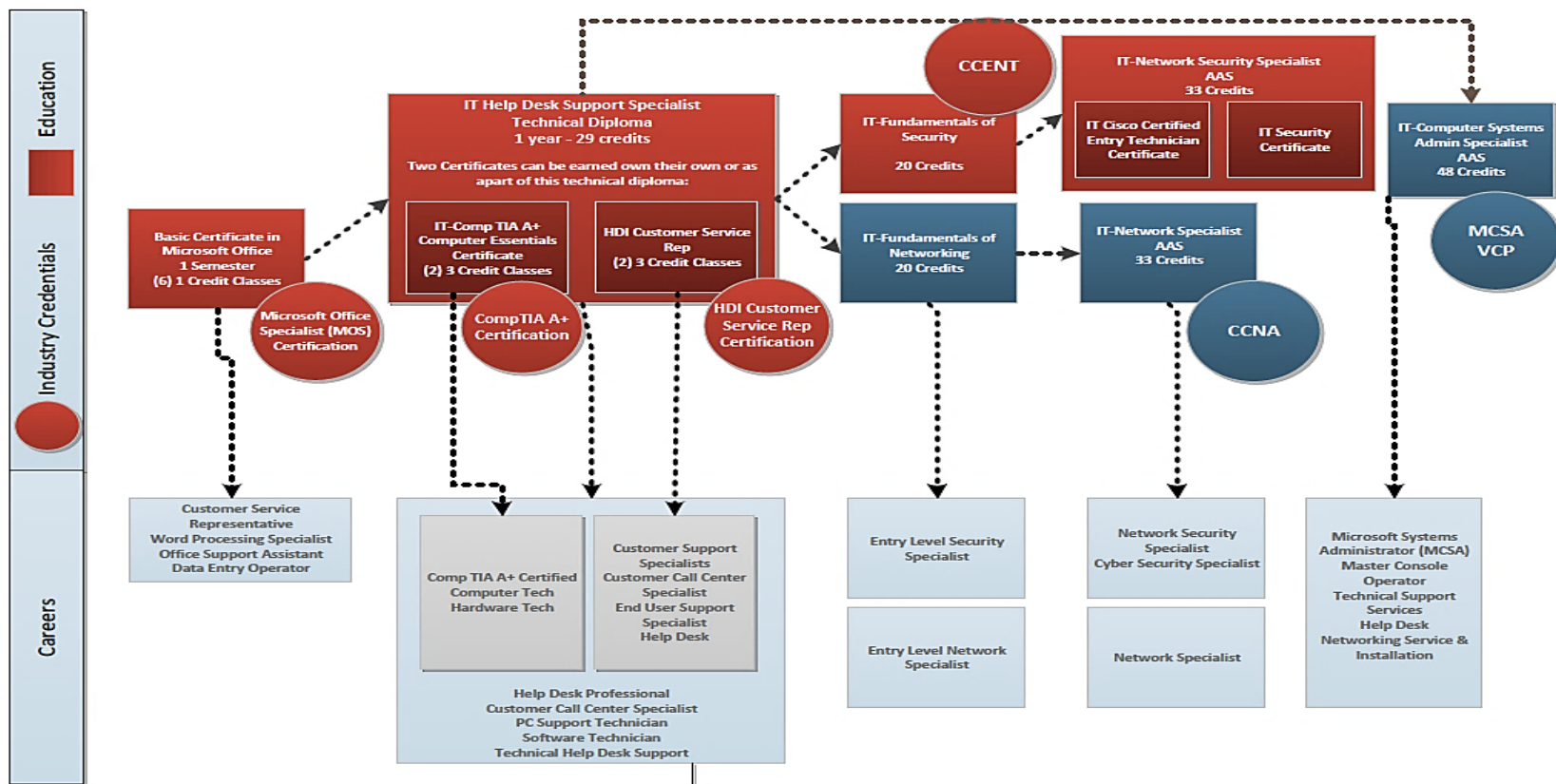
Source: Madison College, 2017.

Five colleges visited had programs with some elements of self-paced learning. Students at the Community College of Baltimore County found the style appealing. "It's self-paced, but you are not dragging behind." At Long Beach Community College, focus group participants appreciated that they could redo tests or assignments online and could go back and review concepts with which they were struggling. At Madison, on the other hand, participants liked that the program was accelerated and rigorous rather than self-paced. One participant said, "The real world has deadlines. Classes were authentic."

Technology-enabled learning strategies that were designed to support accelerated learning were also common, with nearly three-quarters of the Round 3 colleges implementing hybrid-learning strategies, whereby instruction is delivered both online and in person (see table 5.1). Online learning was also a popular technology-enabled learning approach. About a quarter of colleges used real-time, online instruction (26 percent).[52]

All 14 colleges visited included online instruction in their grant-funded programs. Two of the colleges (Northcentral Technical College District and University of Vermont) incorporated real-time, online interactions. Focus groups revealed that participants liked the flexibility of online instruction but also recognized its drawbacks; participants said, "you have to be self-motivated," and success "depends on how you learn." Overall, participants reported that they liked a combination of online and in-person instruction.

Finally, over half of the Round 3 colleges developed prior learning assessments to allow credits to be awarded for prior learning or work experience to help decrease the time to complete a program (see table 5.1). Nine colleges visited offer prior learning assessments, either for credit or to place students in the appropriate level of classes. At Madison, students received prior credit for basic computer knowledge and could move to higher level classes. One college did not accept credits for similar certificate programs from other institutions but awarded credit for prior learning instead.

5.2 Learning Strategies to Support College Persistence and Completion

Round 3 colleges also focused on learning strategies that would support college persistence and completion. As shown in table 5.2, over half of colleges most often focused on articulation from grant-

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[52] Compared to Rounds 1 and 2, simulations and online learning were more commonly used strategies in Round 3. See appendix E for a comparison of Rounds 1, 2, and 3 survey results.

funded programs to more advanced programs. The next most common persistence and completion strategy for colleges was competency-based education, designed to focus the knowledge, skills, and abilities necessary to successfully perform critical work functions in an industry or occupation rather than requiring a specific amount of "seat time" for completing a course or program. Colleges also sought to improve remedial and developmental education to support persistence and completion. Over a third of colleges used contextualized learning, which involves embedding traditional educational subjects such as math into technical coursework, and made improvements to basic skills/adult basic education.[53]

TABLE 5.2

Learning Strategies Implemented by Round 3 TAACCCT Colleges to Support College Persistence and Completion

| College Persistence and Completion Strategy	% of Colleges
Articulation from grant-funded programs to more advanced programs	54%
Competency-based learning	48%
Development of knowledge, skills, abilities, and other characteristics (KSAO)	36%
Contextualized learning	35%
Improvements to basic skills/adult basic education	35%
Team teaching	26%
Restructuring of developmental education	18%
Improvements to English as a Second Language instruction	3%

Source: Urban Institute survey of Round 3 TAACCCT colleges, 2016–17.
Notes: N=182; five missing colleges. Percentages do not add to 100 percent. Respondents could provide more than one response.

With TAACCCT's emphasis on implementation of career pathway strategies, DOL encouraged colleges to implement articulation and transfer policies to help participants successfully complete training and potentially move on to additional education and training programs. This includes the transfer of credits earned while enrolled in a grant-funded program to associate or baccalaureate degree programs at other institutions. The survey also asked Round 3 colleges if they had implemented new types of transfer and articulation policies/agreements using grant funding. As shown in table 5.3, about 40 percent of colleges implemented articulation agreements between continuing education and degree programs and/or implemented new transfer policies/agreements with four-year institutions.

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[53] Compared to Rounds 1 and 2, contextualized learning was a less commonly used enhanced academic support in Round 3. See appendix E for a comparison of Rounds 1, 2, and 3 survey results.

Less than one-third of colleges indicated that they had not established new types of articulation/transfer policies with their grants.[54]

New Transfer and Articulation Policies and Agreements Implemented by Round 3 TAACCCT Colleges

Articulation Policy or Agreement	% of Colleges
Articulation between continued education and degree programs	42%
New transfer policies/agreements with four-year institutions	40%
Other transfer/articulation agreements	12%
No new types of articulation or transfer policies or agreements	28%

Source: Urban Institute survey of Round 3 TAACCCT colleges, 2016–17. Percentages do not add to 100 percent. Respondents could provide more than one response.
Note: N=178; nine missing colleges.

Twelve of the Round 3 colleges visited reported having agreements with other colleges and universities so that participants could transfer credits from the grant-funded program to a four-year institution. Credits earned for an associate degree at some colleges transferred seamlessly within the state university systems and were applied to a bachelor's degree, such as from Mesa Community College to Arizona State University or from Madison College to Herzing University.

Through the grant, several colleges visited entered into articulation agreements with colleges and universities in their state and even across state lines. Both Northcentral Technical College District and Madison College, part of the INTERFACE consortium, put articulation agreements in place with colleges throughout the University of Wisconsin system. Madison College entered into articulation agreements for the two-year network security program with multiple universities across the state, although certificate programs did not transfer. Participants enrolled in the BOOST consortium programs, both at Midlands Technical College and at other member colleges in state, could transfer credits within South Carolina. Members of the BOOST consortium reported that developing articulation agreements across state lines had proved challenging.

Some articulation agreements were preexisting but strengthened due to the grant. Working across state lines, North Dakota State College of Science had a "2+2 program" with Minnesota State University Moorhead through an articulation agreement. Minnesota State University Moorhead accepted all previous education credits, so that North Dakota State College of Science graduates could enter Moorhead with standing as a junior class member. The participant had to be a graduate and have an

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[54] Compared to Rounds 1 and 2, Round 3 focused more on new transfer policies/agreements with four-year institutions. See appendix D for a comparison of Rounds 1, 2, and 3 survey results.

associate of applied science degree in welding, robotics, or precision machining to qualify. Through this program, participants could obtain a bachelor's degree in project or operations management.

Missouri State University-West Plains also expanded its articulation agreements with colleges and universities, both within the state and across state lines. The college successfully negotiated an agreement with a state college, which had an online bachelor's degree program in health information technology. It was working on two other agreements, one within state and another state, toward the end of the grant. College and program leadership noted that entering articulation agreements for new programs was a slow process, as it took time to obtain certifications from national credentialing bodies and to develop relationships with leaders and administrators at other colleges.

To improve academic skills of participants, nine colleges visited used contextualized learning strategies to teach math or reading within the technical training. Four colleges used team teaching. At Front Range Community College, which used both techniques, students felt that they were improving their math skills. The participants also appreciated having more than one teacher in the classroom as it allowed for more personal attention, and they found it helpful to have instructors with different skillsets. Staff at three colleges, Lewis & Clark Community College, Mesa Community College, and Northcentral Technical College District, reported that their TAACCCT programs were informed by the Integrated Basic Education and Skills Training model from Washington state, which emphasizes both contextualized instruction and team teaching to accelerate learning for participants with low levels of proficiency in math or reading.

5.3   Learning Strategies to Support Connections to Employment

Of the education and training strategies to support connections to employment, Round 3 colleges most commonly provided internships and simulated learning experiences (see table 5.4). Other approaches included: occupational preparatory classes such as preapprenticeship programs and occupational boot camps, job shadowing, on-the-job training (other than registered apprenticeships), enrollment in cooperative education or work-study programs, clinical placements (health care industry only), and registered apprenticeships.

TABLE 5.4

Education and Training Strategies Implemented by Round 3 TAACCCT Colleges to Support Connections to Employment

Connections to Employment Strategy	% of Colleges
Internships	59%
Simulations	59%
Other preparatory classes (e.g., preapprenticeship, occupational boot camps)	25%
Job shadowing	24%
On-the-job training other than registered apprenticeship	20%
Cooperative education or work-study program	18%
Clinical placements	16%
DOL-approved registered apprenticeships	10%
Other work-based learning approaches	6%

Source: Urban Institute survey of Round 3 TAACCCT colleges, 2016–17.
Notes: N=182; five missing colleges. Percentages do not add to 100 percent. Respondents could provide more than one response.

Internships were a common strategy among the colleges visited, with 11 colleges offering these opportunities across multiple industries:

- agriculture (Missouri State University-West Plains);

- advanced manufacturing (Front Range Community College, Mesa Community College, North Dakota State College of Science, and Pikes Peak Community College);

- information technology (Community College of Baltimore County, Northcentral Technical College District, Madison College);

- math and engineering (University of Vermont);

- transportation (Hinds Community College, Lewis & Clark Community College).

One college offered preapprenticeship training to prepare participants for work in the construction industry (Long Beach Community College). Two colleges offered clinical practice in health care (Midlands Technical College, Wallace Community College Selma).

…. internships get students serious about their career and using their skills and education.
—TAACCCT Project Director

Having work-based experiences as part of the grant-funded programs was the result of coordinated efforts between the colleges and their partners. Both project staff and employers emphasized the value of internships and other on-the-job experiences as a way for participants to develop occupational skills and gain exposure to the routines and culture of the workplace. They provided a critical recruiting mechanism for new job hires, as employers had relationships and direct contacts with the staff and participants. As a staff person noted, "When students do their clinicals, that's a working interview. If students are enthusiastic, proactive, and show that they want to be there, employers will want them there."

Designed to incorporate work-based learning on campus or online, simulations were another popular teaching technique among the colleges, with 11 of the colleges visited using simulation technology. (See box 5.1 for more information on Midlands Technical College's simulation center.) At Hinds Community College, truck-driving participants could practice driving techniques with which they were struggling on simulators. The technology allowed the instructor to simulate the experience of driving in different weather conditions, for example. Focus group participants agreed that the simulators were very beneficial. One participant said, "I couldn't shift at all my first week. They put me on the simulator, and I got it." Participants also noted that the simulator helped develop muscle memory, and that it was safer to practice on the simulator than on the road.

BOX 5.1

The Simulation Center at the BOOST Program

At Midlands Technical College, TAACCCT funds were used to build a simulation center for the BOOST program. The center used high-tech simulators and 3D/virtual reality technology. Simulation equipment and computer-based training scenarios enhanced student learning so that skills are easily transferred to clinical settings. For example, phlebotomy participants practiced specific procedures, such as blood draws, on a manikin arm. Nursing participants interacted with human-like, high-fidelity manikins that presented computer generated, medical scenarios in a simulated hospital room. Simulation enables more participants to gain experience practicing different real-world situations under the guidance and supervision of faculty. One focus group participant said, "It's nice to simulate walking in a patient's room and the patient talks back to you. It made working with actual patients easier."

Source: TAACCCT Round 3 Urban Institute site visits, 2017.

5.4 Participant Perspectives on TAACCCT Programs of Study

Participant perspectives of the grant-funded programs of study were obtained through focus groups conducted at 13 of the 14 colleges visited. Overall, participants across the colleges expressed high levels of satisfaction with the training and opportunities they received. They reported that the quality of instructors and opportunities for hands-on experience and potential employment posttraining as key reasons for recommending the program to others.

Participants stressed that they liked that their instructors had industry experience upon which to draw. Real-world experience not only allowed instructors to provide detailed examples of how skills would be applied in the industry but also inspired participants' trust and confidence in the program. As a participant from North Dakota State College of Science explained, "Technology is overwhelming at first, but all the instructors have been in industry, and so they know what they're doing." Through academic tutoring, career advising, and mentoring, instructors played a critical role in supporting participants through the program. A participant at Midlands Technical College emphasized the impact of having good instructors inspire them to begin a career: "The instructors are not here for a job; they want to create future health care workers that know what they're doing, why they're doing it." Participants reported that career coaches provided additional advising, connecting them to necessary financial resources, social supports, and academic mentoring critical to helping them complete their program. This was particularly important to first-generation students who did not have family members to ask about careers or opportunities for academic and financial support.

Participants appreciated that the courses, materials, and equipment were the same as, or simulated versions of, the tools used in the industry. Having hands-on experience built into the programs, regardless of industry, provided participants with opportunities to participate in clinicals, labs, in-class group projects, and simulations. Whether at a clinic, a simulation center, or a construction site, this experiential learning enabled participants to practice on the equipment firsthand, observe and learn from peers, and engage in teams. Participants reported that learning in simulated environments helped them feel braver to try things, make mistakes, and gain confidence in the skills they were building when applying for jobs. Participants at all colleges reported that the similarities between the coursework and hands-on training and industry strengthened their job prospects, as employers were seeking to hire people who could confidently demonstrate industry skills and experience with the equipment.

Many programs embedded accelerated learning strategies to facilitate participants' quick return to the workforce. Participants needed to learn a lot in a short amount of time but reported having good tutoring and support from instructors and peers. "As a class, we learn from each other. We learn from our mistakes. We ask each other questions all of the time. We will grab each other and ask for help," reported a participant at Lewis & Clark Community College.

Participant response to the fast pace, however, was mixed. Whereas many preferred the short duration of the program because it allowed them to return to the workforce quickly, other participants were interested in having more time to learn and process the new information. Condensing the materials over a short, intensive period made some participants feel as if they were cramming constantly. A Front Range Community College participant expressed this tension: "It's hard because it seems like they're trying to balance out the curriculum for the industry, want us out the door pretty quickly so that companies can get employees, [but] there could be a longer program where you spend more time on certain skills, and those might be skills you want to go back and improve upon."

The most common challenge expressed by participants in the focus groups concerned conflicts between the program's schedule and work-life demands. Participants reported wanting greater flexibility with respect to classes and internships to fully partake in and benefit from the program and their studies. While some programs offered online courses and classes at different times to be flexible, for other programs, this was not feasible due to the need for equipment, instructors' schedules, or participants' lack of access to the internet. For some participants, finding internships and clinicals (which were required program components) that fit with their schedules was challenging. As one Midlands Technical College participant described, "If you have kids or a job, you don't know when you'll be available to work or when you'll need child care until it's too late to set something up."

6. Access to Support Services for TAACCCT Participants

Round 3 colleges were permitted to use grant funds to help participants access support services, including academic, financial, personal, and career supports. Academic supports included intensive advising and tutoring, Financial supports included financial aid access and counseling, emergency funds, small grants, and scholarships. Personal supports included counseling, student support specialists, and access to public assistance. Career supports included career navigation, resume and interview preparation, and soft skills training. It was anticipated that by improving access to support services, TAACCCT participants would experience fewer barriers to persisting in and completing their grant-funded programs. In addition, the colleges would be able to build stronger connections to employment for participants through career services offered. This chapter describes the support services that the Round 3 colleges helped participants access on their campus and from their partners.

These are the key findings from this chapter:

- Over half of the Round 3 colleges surveyed coordinated enhanced academic support for participants, such as personalized instruction and tutoring. Each of the colleges visited had staff and services in place to provide academic support to participants. Staff who worked most closely with participants to be sure they were on track academically were instructors, advisors, and tutors.

- Colleges helped ensure that participants could access financial aid and helped support their financial stability during enrollment. Over three-quarters of the colleges surveyed provided access to Pell grants and to other financial aid. Other financial aid could include other federal and state financial aid, tuition assistance through employers, and Workforce Innovation and Opportunity Act funding. More than half of colleges provided access to financial counseling, either on campus or from partners.

- Across the colleges surveyed, the most common personal support provided to participants was access to case management services or proactive advising to help them address barriers to completion. Some colleges also offered peer support groups, personal and family counseling, transportation assistance, emergency assistance, coordination with public assistance, and child care assistance.

- Colleges provided a range of career services to facilitate job placement. Most colleges surveyed provided interviewing skills/résumé workshops, referrals to job openings, job search assistance, employment/career counseling, and job-readiness/soft-skills training. Only two percent of colleges indicated they offered no such employment services at their institution.

- The colleges visited reported that navigators and career counselors actively supported participant retention and academic success, proactively checking on participant progress, intervening when needed, and supporting program completion. Some project staff worked closely with participants, developed trusting relationships, and served as their first line of

support. In other programs, supports were provided through preexisting institutional networks, such as instructor referrals to campus counselors.

■ Partners such as American Job Centers and employers also provided some financial, personal, and career supports for participants, though the amount and types of supports provided varied widely across the colleges visited.

6.1 Academic Supports

Over half (58 percent) of the Round 3 colleges surveyed coordinated enhanced academic support for participants, such as personalized instruction and tutoring. Each of the colleges visited had staff and services in place to provide academic support to participants. Staff who worked most closely with participants to be sure they were on track academically were instructors, advisors, and tutors. Navigators and career counselors/coaches, who are discussed in more detail later in this chapter, also worked closely with instructors to ensure that participants stayed on track and performed well.

The colleges visited implemented various strategies to promote academic success. These strategies included the use of "intrusive" advising from an advising specialist as well as case management models. Colleges reported that navigators and career counselors actively supported participant retention and academic success, proactively checking on participant progress, intervening when needed, and supporting program completion. At Lewis & Clark Community College, the navigator referred participants in need of academic support to student success centers and spoke with the participants' instructors about their performance. At Midlands Technical College, career counselors contacted each participant at least once a semester. They also checked up on participants who were missing classes. Staff reported that this follow-up helped with retention, as the career counselors listened to and assessed participants' needs and referred them to services or supports to prevent dropping out or withdrawal during the semester. For Front Range Community College and Pikes Peak Community College, navigators served as intensive academic case managers for participants, seeing them through all phases of the program and ensuring at the end that the participants applied for the certifications that documented the skills and competencies they attained and which validated a key milestone along their career path.

Eight colleges visited reported that instructors served as the primary source of academic support so that participants could master course content. Instructors made themselves available to participants and informed them of additional resources. At Madison College, faculty posted resources on the online education platform Blackboard, such as their contact information and contact information for college advisors, the Americans with Disabilities Act program, the writing center, and tutoring. For some

projects, navigators, career counselors/coaches, and advisors worked closely with instructors to ensure that participants "didn't slip through the cracks" by missing class or falling behind (Lewis & Clark Community College, Madison College, Missouri State University-West Plains, Wallace Community College Selma). As one instructor noted, the advisors "all know the participants' family situations, where they work, and why they're not in class." In the Allied Health program at Missouri State University-West Plains, if participants were not in class, instructors called and would personally intervene. At Wallace Community College Selma, the career counselors team taught study skills with the instructor. Participants had a block of time for in-class remediation and formed study groups.

Most colleges visited made tutors available to participants through on-campus or program-related resources. At Hinds Community College, the truck-driving program had a basic skills instructor who served as a tutor for participants as they prepared for their permit test. University of Vermont implemented a targeted, two-tiered approach to tutoring. There were extensive tutoring options available on campus for degree-seeking/traditional participants, but for the non–degree seeking/nontraditional participants, University of Vermont set up a peer tutor program funded by the grant. Participants who had already taken the courses were hired as tutors, and University of Vermont offered one-on-one tutoring and some group tutoring. University of Vermont staff observed that one-on-one tutoring was important because nontraditional learners were not comfortable expressing a lack of knowledge in front of other people. University of Vermont also organized a textbook-lending "library" for participants who could not afford to buy text books.

On-campus academic resources noted by project staff included student success centers and labs. Campus resources available to all participants were integrated into the grant-funded programs as needed. For example, North Dakota State College of Science formed an internal partnership with the college's academic services center, which had instructors that taught remedial math and English classes, and approaches to remediation were tailored to learning styles and needs.

6.2   Financial Supports

Round 3 colleges helped ensure that participants could access financial aid and helped support their financial stability during enrollment. As shown in figure 6.1, Round 3 colleges, rather than partners, provided most of the help for participants needing financial support. Over three-quarters of colleges provided access to Pell grants and other financial aid. Other financial aid could include other federal and state financial aid, tuition assistance through employers, and Workforce Innovation and Opportunity Act funding. Over 50 percent of colleges also provided access to financial counseling. To the extent that

partners were involved in financial assistance, they played a greater role in providing access to other financial aid and financial counseling than in providing access to Pell grants.

Financial Support Services Leveraged by Round 3 Colleges within Their Own Institution or from Partnering Organizations
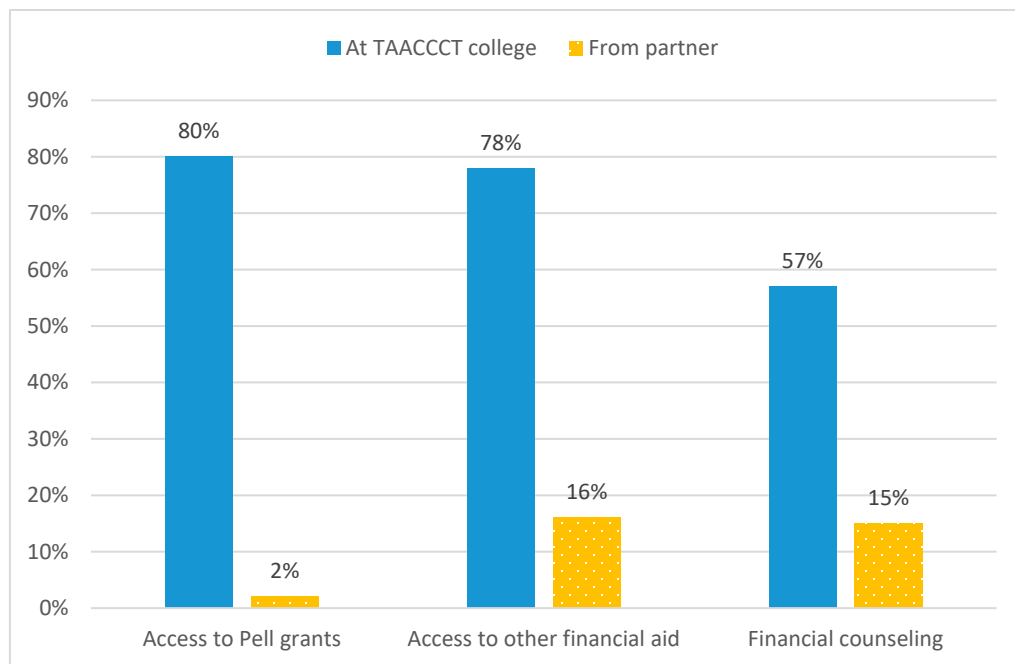
Source: Urban Institute survey of Round 3 TAACCCT colleges, 2016–17.
Note: N=181; six missing colleges. Percentages do not add to 100 percent. Respondents could provide more than one response.

Four of the 14 colleges visited (Midlands Technical College, Missouri State University-West Plains, Northcentral Technical College District, Wallace Community College Selma) worked in close cooperation with internal and external partners to address participants' financial needs and barriers. Midlands Technical College worked closely with multiple partners to obtain resources to address their participants' needs. College-based resources included a foundation providing emergency funds, small grants, and scholarships to participants Additionally, some faculty kept extra textbooks in the classroom for participants who could not afford to buy them. Outside partners assisted by providing supplies and textbooks. A federally funded grant program targeting Temporary Assistance for Needy Families recipients provided funds for transportation, day care, and utilities. Through its network of employer partners, participants could obtain part-time employment that did not require professional experience (e.g., working at an assisted living center). Low-income participants also received Pell grants

for tuition assistance, received support from federal TRIO programs, which provide supports for individuals from disadvantaged backgrounds, or earned wages through work-study programs.

At Wallace Community College Selma, a career coach noted that, "Often students get overwhelmed and drop out. An advisor can walk them through the problem-solving process before this happens." Career coaches addressed all issues and financial barriers and worked with them to develop a solution to their transportation or child care needs. Wallace Community College Selma also reached out to faith- and community-based partners to link participants to resources, such as a clothes closet for interview clothing or small scholarships for books.

At Northcentral Technical College District, all participants in the information technology program were eligible to apply for scholarships and there were college-supported emergency scholarship funds to pay for gas and heating bills. The college donated refurbished and reused laptops to participants. Northcentral Technical College District had other grant support through the college that targeted first-year students. During the grant, the college also received a grant to focus on helping participants in their final year.

Missouri State University-West Plains had various institutional and external resources in place to support its participants—especially those who were low-income, TAA-eligible, first-generation college students, and veterans. Staff mixed and matched these resources to meet participants' needs. The college had an emergency fund, which provided small grants to participants. The instructors served as the referral system for vocational rehabilitation, counseling, and therapy services. TAA-eligible participants received support for transportation, emergency, vehicle repair, insurance, and child care services through the Missouri job center. Support through TRIO was available for low-income, first-generation college students. It offered financial literacy workshops, life skills training, counseling, free tutoring, career counseling, veteran services, disability services, testing, and financial help.

Veterans' services were already in place at Missouri State University-West Plains but were coordinated with the grant-funded program to serve their participants. The veterans' service officer at the Missouri job center linked veterans to disability services and benefits. The college had three veterans' service officers who assisted with the application and admissions process and who could offer vocational rehabilitation services through the U.S. Department of Veterans Affairs.

6.3 Personal Supports

Personal supports were important for helping some TAACCCT participants persist in and complete their programs of study. Figure 6.2 shows that 72 percent of the Round 3 colleges helped participants access case management services or proactive advising to help them address barriers to completion. This was the most common personal support offered to participants. To a lesser degree, colleges also offered access to peer support groups, personal and family counseling, transportation assistance, emergency assistance, coordination with public assistance, and child care assistance. Partners also helped participants access these services, and in the cases of transportation assistance, emergency assistance, and coordination with public assistance, partners were more likely to provide access to personal supports.

The colleges visited provided resources to assist participants that were dealing with personal issues and balancing family, school, and work obligations. Navigators, career counselors/coaches, and instructors assisted participants with staying on track and helping them address life circumstances that could potentially set them off course. As one partner noted, staff helped participants "handle life stuff," especially participants who did not have the emotional support of family and friends or who lacked resource management skills.

Having a support system is critical, Career coaches provide guidance, provide pathways to goals, build confidence in students so that they can complete a program. There's tremendous growth in self-actualization so [that] students can express their needs and ask for help.

—TAACCCT Staff

FIGURE 6.2

Personal Supports Leveraged by Round 3 Colleges within Their Own Institution or from Partnering Organizations
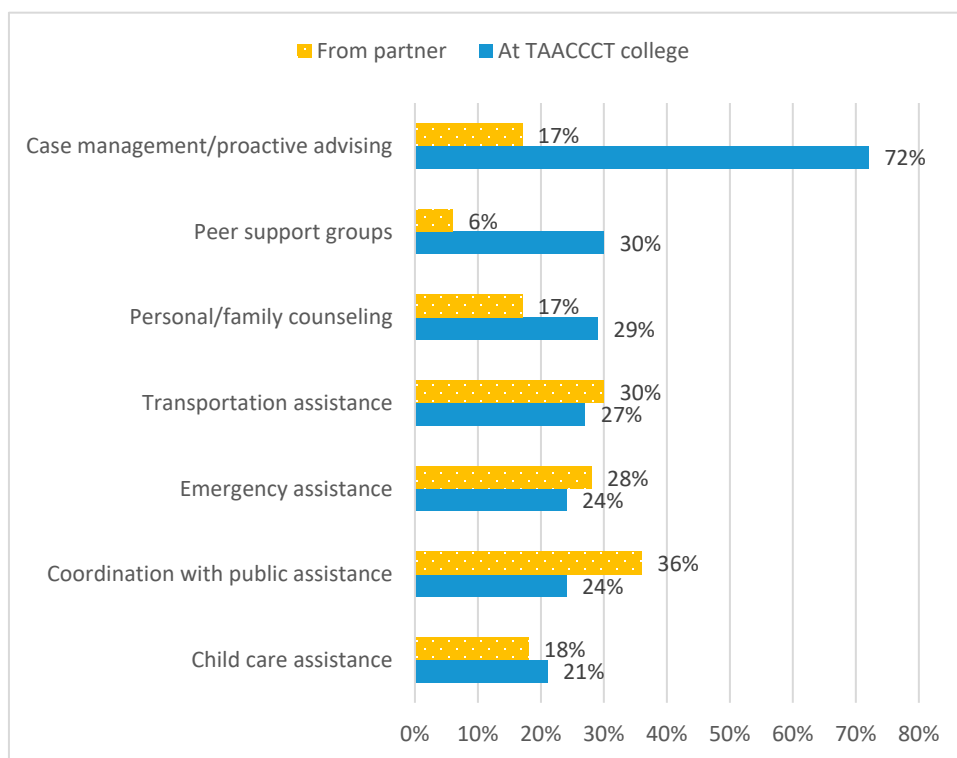
Source: Urban Institute survey of Round 3 TAACCCT colleges, 2016–17.
Note: N=181; six missing colleges. Percentages do not add to 100 percent. Respondents could provide more than one response.

Some project staff worked closely with participants, developed trusting relationships, and served as their first line of support. In other programs, supports were provided through preexisting institutional networks, such as instructors linked to campus counselors. Some needs common to participants across programs were transportation and child care. Some participants needed funds to "fix a car, pay for gas and the babysitter" or pay the heating bill so that they could stay in school.

In the truck-driving program at Hinds Community College, two student support specialists checked on participants on a regular basis. As one staff noted: "We had people who would just get off the truck and leave [in the middle of their internship]. Now, they get a phone call from the support specialist every week. The support specialist helps them with any issue. Maybe their credit card got declined. They can call them at 10 p.m. at night. Maybe they don't have the right paperwork. They're troubleshooting. They're here 7:30 to 4:30. But [they're really available] 24/7." At Front Range Community College, the navigator served as an intermediary to help participants seek services, letting them know that there is

someone to talk with and get help from. Staff reported that it worked better to have the navigator mediate the on-campus support process by creating relationships with staff in student services, setting up appointments, and being readily available to the participants. At Northcentral Technical College District, personal supports were taken care of by advisors in the college-wide advising center. Likewise, at Madison College, college faculty would refer participants with personal issues or needs to advisors.

Ten of the colleges visited reported working closely with social services and the public workforce system to provide participants with needed supports. In most cases, this was a reciprocal process. The colleges received referrals from these agencies about Temporary Assistance for Needy Families recipients or displaced workers who needed training. They then referred their participants to social services agencies and American Job Centers when they needed assistance. For example, the Wallace Community College Selma worked with the social services agency and the American Job Center to recruit Temporary Assistance for Needy Families recipients and displaced workers, respectively. As the grant did not cover personal supports, the social services agency and the American Job Center helped to connect Wallace Community College Selma participants with child care services and other supports that were needed to continue their education. The navigator at Lewis & Clark Community College referred low-income participants to the county social services agency for Temporary Assistance for Needy Families and Supplemental Nutrition Assistance Program benefits, as well as for housing assistance.

6.4 Career Supports

Round 3 colleges also focused on building connections to employment for participants by ensuring they were prepared for and could obtain a job in their occupation of training. The survey asked colleges about the career services participants could access to assist them with the transition from training to work. As shown in figure 6.3, Round 3 colleges focused on providing the full range of career services needed to facilitate job placement through their own institutions, and to the extent possible, supplementing such services with those available through partners. Nine in 10 colleges indicated that, under their grants, they provided directly from within their own colleges the following employment services: interviewing skills/résumé workshops, referrals to job openings, job search assistance, employment/career counseling, and job-readiness/soft-skills training. Only 2 percent of colleges indicated they offered no such employment services at their institution. Colleges indicated that, in addition to their own efforts, they connected with partners for delivery of career services, particularly local workforce development boards and American Job Centers. (See chapter 7 for more on partnerships with the local public workforce system). The most common career services provided by

partners were referrals to job openings, closely followed by interviewing skills/résumé workshops, employment/career counseling, job search assistance, and soft-skills training.[55]

Career and Employment Services Provided to Round 3 TAACCCT Participants

% of responding TAACCCT colleges ■ At your institution ■ From a partner

	Interviewing skills/résumé workshops	Referrals to job openings	Job search assistance	Employment/career counseling	Job readiness/soft skills training
At your institution	92	91	89	88	88
From a partner	38	39	37	38	32
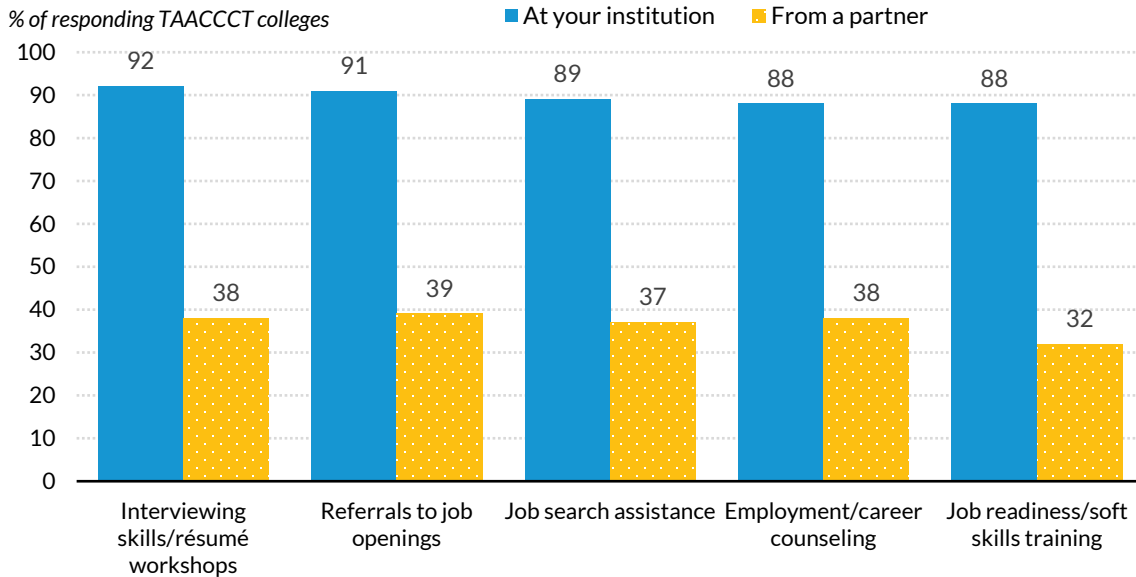
Source: Urban Institute survey of Round 3 TAACCCT colleges, 2016–17.

Note: N=184; three missing colleges.

All the colleges visited ensured that an array of career supports was available to participants. While most colleges had career services available to all participants on campus, those provided by the colleges were more individualized and industry-specific. As shown in table 6.1, all colleges offered more than one career supports that focused on preparing participants to get a job in their field of study. The one exception was Hinds Community College: participants in both the truck-driving program and in the river-barge training program were guaranteed a job if they completed a program satisfactorily.

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[55] Employment services provided through the institution or from a partner were similar across Rounds 1, 2, and 3. See appendix E for a comparison of Rounds 1, 2, and 3 survey results.

TABLE 6.1

Career Transition Supports Offered by Round 3 TAACCCT Colleges

TAACCCT College	Career Counseling/ Navigation	Résumé Assistance	Interview Prep	Job Search and Placement	Job Fairs	Field Trips/ Industry Tours	Net-working with employer
Lewis & Clark Community College	✓	✓	✓	✓			
Hinds Community College	✓			✓a			
Midlands Technical College	✓	✓	✓	✓b			
Wallace Community College Selma	✓	✓	✓	✓b	✓		
Northcentral Technical College District		✓	✓	✓			
Madison College		✓		✓			
Front Range Community College	✓	✓		✓			✓
Pikes Peak Community College	✓	✓	✓	✓			
Missouri State University-West Plains	✓	✓		✓	✓	✓	
North Dakota State College of Science	✓	✓	✓	✓	✓	✓	✓
Long Beach City College	✓	✓	✓	✓a			
University of Vermont		✓		✓			
Community College of Baltimore County	✓	✓		✓			
Mesa Community College	✓	✓	✓	✓	✓		

Source: Urban Institute TAACCCT Round 3 site visits, 2017.
Notes: [a] apprenticeship placement. [b] clinical placement.

Project staff—instructors, navigators, career counselors/coaches, program or employer outreach coordinators—and employers were involved in providing career supports. Some examples of these efforts are:

- At Front Range Community College, the navigator, program coordinators, and career services team worked together to help with the job search process for advanced manufacturing. The navigator obtained information on job openings which was shared with the program coordinators. Program coordinators had their own contacts. The employment outreach coordinator connected participants to job openings and internships and worked with employers to post job opportunities.

- At Midlands Technical College, the career coaches worked closely with the human resources departments in hospitals and assisted living centers to share guidance with participants about how their résumé and application should be filled out for health care positions (e.g., focusing on key words to get their application to the next round of review).

- At Northcentral Technical College District, a dedicated advising specialist worked with participants and provided guidance on career exploration and preparation, conducted mock interviews, reviewed résumés, and held a "dress for success" session at the end of the program.

- At North Dakota State College of Science, instructors took the lead on connecting participants to employers and tapped into their extensive industry networks. They contacted local and regional businesses to ask about job openings and needs. They let employers know about welding participants that would be suitable candidates and helped facilitate the connection. Instructors posted jobs outside their offices and on a projector screen during class.

[Staff] are very student-centered. They care about our education. With the instructors being recently from the field, they know where the demand is and where the growth is. They'll bend over backwards to make sure you have the skills.

—TAACCCT Participant

Eleven colleges visited reported providing access to career navigation services (also called career coaching and counseling) to assist participants in choosing a career. Navigators, career coaches,

instructors, employers, and college career services provided guidance. At Front Range Community College, the navigator helped recruit participants to the program and explained the options available to them in advanced manufacturing. The project director also met with applicants to get a better idea of their interests and backgrounds and helped guide them to the most appropriate program for them. Participants also received guidance on career pathways as part of the intake and enrollment process.

At Midlands Technical College, career coaches were instrumental in providing guidance to participants choosing and completing health care certificate programs. Potential employers also assisted by visiting with participants in the program and providing inspirational talks. The close contact between the career coaches and the employers about promising participants and employment opportunities facilitated participant entry into and advancement within the workforce. At North Dakota State College of Science, instructors who had relationships with industries and employers facilitated participants along a career pathway. However, some participants would leave the program as soon as they obtained a credential and had a job offer. Similarly, instructors at Hinds Community College offered guidance to participants on whether to work for the trucking company as an employee or to become an owner/operator of a truck oneself.

During the focus groups, participants noted that career navigators provided most of the career-related activities. Navigators helped edit résumés and informed participants about job opportunities. They also helped bring employers to campus to guest lecture on job skills, such as punctuality and showing initiative, as well as to help explain the job application process. They helped participants connect with the American Job Centers in their community to learn soft skills and get help applying to jobs. In many cases, participants capitalized on internships or part-time jobs they had taken while in the program and took full-time jobs with these employers after completing training.

Instructors, navigators, and other support staff maintained relationships with and provided some support to participants following their completion of the program at three of the colleges visited. At North Dakota State College of Science, supports were limited to the period of enrollment, but instructors had continuing relationships with some participants that allowed for ongoing support and guidance. At Mesa Community College, the career navigator provided individualized supports as needed; whether support was needed following the program depended on the participant. After job placement, the navigator followed up every six months or so. At Midlands Technical College, postprogram support was more intentional and part of the delivery model for each cohort. The career coaches stayed in touch with participants after program completion and asked how they could be of help. They contacted participants to ask about their employment status and if they needed help with résumés or assistance finding a job.

I take pride in making sure that students are in the right place. I don't have a problem telling a student that they're not in the right place. We're not in the business of taking people's money. It's got to be the right fit.

—TAACCCT Navigator

Also shown in table 6.1, 13 colleges assisted participants with preparing résumés by offering one-on-one support or workshops. Eight colleges reported that they worked closely with participants to prepare for interviews by holding mock interviews; coaching participants through the process; discussing employer expectations; and providing pointers and tips on self-presentation, appropriate dress, and etiquette. Four colleges held job fairs to expose participants to career options and allow them to meet one-on-one with potential employers; this provided opportunities to share résumés and network. Only two colleges reported that employer partners provided participants with tours of and field trips to their organizations to give participants an overview of the industry and jobs. Many colleges had employer partners come directly to the training programs to meet with participants and speak about job opportunities and needed qualifications. Two colleges reported providing industry networking opportunities with additional employers for participants.

The colleges used multiple methods to expose participants to workplace culture associated with the programs of study. The level of exposure also varied in the degree to which employers were directly involved. Some employers offered participants tours of job sites to give them an insider's view of routines, demands, and the environment. Other programs had employers come to classes and talk to participants about working in various industries such as agriculture, health care, information technology, and manufacturing. At Community College of Baltimore County, cyber club meetings included presentations from employers, in which they described the work environment to participants. Participants at Long Beach Community College were exposed to the culture of unions, and the construction program included an "apprenticeship-readiness" component. With other colleges, exposure to workplace culture was integrated into the program or extracurricular activities, such as a three-day skills workshop known as Ready to Work held by University of Vermont or the Skills USA clubs supported by North Dakota State College of Science.

Eight of the colleges visited included soft-skills training into the program curricula. Several had very strict policies that emphasized class attendance, punctuality, and appropriate on-the-job behavior. Developing a team ethic and being able to collaborate and work with others were important skills to

cultivate, whether one planned to work as a tankerman or steersman on a river barge, a welder in a machine shop, or a technician in a computer lab. Partners and faculty frequently noted the importance of participants developing soft skills. One employer stated that participants needed to be aware of the "right behaviors [before] coming into the workforce." Another emphasized the importance of setting expectations and standards in the training programs, as "every industry wants soft skills and a work ethic." At one college, employers asked for more job-readiness training, but this did not develop into a major part of the curriculum.

We teach students they actually have to work when they have a job, so sometimes we'll randomly pull students to monitor productivity. We'll reinforce that they have to work and have strong attendance records.

—TAACCCT Project Director

Developing communication skills, whether to prepare for an interview with a potential employer or to interact with a potential client, was also critical. As one employer noted, "[We] visit and tell students how to dress and greet people, they practice shaking hands and making eye contact, and tell them to 'leave the hats at home.'" They interviewed participants so they are prepared for job interviews: "What do you want out of this job? Your career?" One healthcare employer noted that, "Students need to learn about being tactful and understanding a business and professional environment. Customer service skills are important. Employers need someone who is compassionate and who can communicate and who can be a manager down the road." Using social media as a teaching tool, participants at the Missouri State University-West Plains medical billing and coding program watched YouTube videos to learn from employer/employee interactions in health settings.

7. Partner Involvement in TAACCCT Projects

Similar to the earlier rounds of the TAACCCT grant program, internal and external partners played many roles in the local projects. Internal partners included an array of departments within a college, such as adult education, career and technical departments, financial aid offices, and student advising. External partners included employers and industry associations, the public workforce system (i.e., workforce development boards and American Job Centers), community organizations, and technical assistance providers. This chapter first provides an overview of the roles of internal and external partners based on findings from the survey. It then discusses strategic alignment and partnerships across TAACCCT projects for the colleges visited, including taking a close look at how those colleges engaged employers for their projects. The chapter concludes with a discussion of the successes and challenges of the partnerships.

These are the key findings from this chapter:

- Over 70 percent of the Round 3 colleges surveyed reported expanding existing—or creating new partnerships with—other departments within their own institutions. Internal partners offered a range of services, including participant outreach and recruitment, academic support and tutoring, access and referrals to support services, job search assistance, career navigation and information, and counseling on program selection and enrollment.

- New and expanded partnerships external to colleges included industry associations, employers, or chambers of commerce; local workforce development boards and American Job Centers; community-based organizations and social services agencies; career or job centers outside of the public workforce system; other postsecondary institutions; and K–12 schools.

- In partnering with the public workforce system, the colleges surveyed most commonly received potential participant referrals, job placement services for participants, access to financial support for participants (e.g., Individual Training Accounts), and connections to employers or industry associations.

- All colleges visited partnered with local employers, and most reported employers as the grant partners they worked with most frequently. Some colleges reported numerous employer partners with varying levels of involvement, and others formed deep partnerships with just a few employers.

- The colleges visited used different strategies to start, expand, and sustain employer partnerships, including dedicating key staff to liaise with industry partners and partnering or contracting with external organizations to find employer partners. Once relationships were formed, project staff developed relationships through advisory board meetings and individual interactions on a regular or as-needed basis.

- Most colleges visited worked with employer partners to design local projects, and all received input on program design, credentials, curricula, or equipment. All of these colleges partnered with employers that provided work experience opportunities or networking opportunities for participants. While all colleges had employer partners that were willing to hire program participants, only three colleges had employer partners making a firm commitment to hire. Six colleges trained incumbent workers for their employer partners.

- Overall, project staff, employers, and participants reported satisfaction with employer partnerships, and employer engagement led to greater alignment between the training programs and employers' needs. Relatedly, employers interviewed reported satisfaction with the participants they had hired.

- Some of the colleges visited had difficulty finding employer partners and sustaining or increasing partner involvement. Colleges also struggled to meet the needs of diverse employers and to keep up with the pace of changing employer needs. Delays in obtaining budget approval and grant funds strained some employer partnerships.

- Nine colleges visited partnered with community- and faith-based organizations including those that served veterans, single parents, immigrants, minorities, rural communities, and local industry. In many cases, these partners supplemented or enhanced support services the colleges could not provide directly.

- The colleges visited experienced varying degrees of success in collaborating with the public workforce system. In some cases, the public workforce system proved critical for providing services and supports for participants. Other colleges expressed disappointment in working with the public workforce system, as they received very few or possibly no participant referrals.

- Four of the colleges visited received technical assistance from several national nonprofits, an instructional software design company, and a local law firm on a range of topics, including sector partnership development, curriculum development, prior learning assessments, internship development, and employer outreach.

7.1 Partnering within the College

As shown in table 7.1, about three-quarters of Round 3 colleges reported expanding current partnerships or developing new partnerships within their own institutions with student support services, workforce/career and technical education departments, and career services. To a lesser degree, colleges partners with college administration, tutoring/academic support centers, other academic departments, adult education/remedial education services, information technology/computer services, and financial aid. The prevalence of these internal collaborations may be, in part, related to improving linkages for participants to a range of student services to promote persistence and completion of coursework, degrees, and other credentials.[56]

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[56] Types of internal departments or offices partnered with varied slightly across the three rounds. See appendix E for a comparison of Rounds 1, 2, and 3 survey results.

TABLE 7.1
Internal Departments or Offices with Which Round 3 TAACCCT Colleges Expanded Current or Developed New Partnerships

Type of Internal Department or Office	# of Colleges Responding to Question	# of Colleges	% of Colleges
Student support services	183	140	77%
Other workforce/career and technical education departments	180	132	73%
Career services	180	131	73%
College administration	178	110	62%
Tutoring/academic support centers	179	119	61%
Other academic departments	174	103	59%
Adult education/remedial education services	176	91	52%
IT/computer services	178	89	50%
Financial aid	179	75	42%

Source: Urban Institute survey of Round 3 TAACCCT colleges, 2016–17.
Note: n=187; colleges could indicate for various types of internal departments or offices if they had developed a new partnership, expanded current partnerships, the partnership was unchanged, or there was no partnership. A small number of colleges did not provide a response relating to each of the factors, and the number of responding colleges for each question varies slightly.

Colleges also reported on the types of resources and services made available to participants by other departments and offices within their institutions. As shown in table 7.2, over 80 percent of colleges reported that other departments in their institution offered participant recruitment/outreach, academic support and tutoring, access/referral to support services, job search assistance, career navigation and information, and counseling on program selection/enrollment.[57]

The colleges visited developed some internal partnerships as part of their grant, though these were less frequent than external partnerships. Internal partnerships included forming new or enhanced relationships with offices or departments within the colleges but outside the departments running the grants; about half the colleges leveraged an internal partnership for their grant activities. Front Range Community College strengthened its relationship with the workforce development department on campus and discussed opportunities to collaborate for the expansion of advanced manufacturing programming. Missouri State University-West Plains worked closely with their admissions office for recruitment and intake. The Long Beach Community College grant allowed the college's workforce development department to build a relationship with the college's adult education department, with the

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[57] Types of resources/services provided by other departments and offices varied slightly in Round 3, compared to Rounds 1 and 2; a slightly higher percentages of Round 3 responding colleges obtained support in the following areas: student recruitment/outreach, curriculum development, purchase and operation of technology-enabled equipment, development of articulation agreements, and development of prior learning assessments. See appendix E for a comparison of Rounds 1, 2, and 3 survey results.

latter providing additional math support to participants. Hinds Community College collaborated with staff across departments to speed up enrollment and intake for grant-funded programs. Lewis & Clark Community College partnered with a "student success team" comprised of various college faculty and staff to address participant needs from a variety of angles, and they partnered with their college research group for data collection. Pikes Peak Community College and Mesa Community College both worked with their veterans' offices on campus to provide supportive services for participants with military backgrounds. Other internal partners provided financial aid and tutoring services.

TABLE 7.2

Resources and/or Services Provided to TAACCCT Participants by Departments or Offices within Round 3 TAACCCT Colleges

Type of Support Provided	% of Colleges
Participant recruitment/outreach	88%
Access/referral to support services	85%
Job search assistance	85%
Academic support and tutoring	85%
Career navigation and information	82%
Counseling on program selection/enrollment	80%
Program development (e.g., career pathways, course sequencing, modularization of courses, incorporation of technology-enabled tools, internships)	78%
Financial counseling and aid	77%
Curriculum development	75%
Enrollment processes	75%
Purchase and operation of technology-enabled learning tools	62%
Testing for college readiness	59%
Leadership/oversight	56%
Development of articulation agreements	54%
Development of PLAs	51%
Remediation	46%
Assistance with tuition waivers	36%
Other (please specify):	2%

Source: Urban Institute survey of Round 3 TAACCCT colleges, 2016–17.
Note: N=185; two missing colleges.

7.2   Partnerships outside the College

The Round 3 grant announcement required grantees to strategically align their grant programs with each of the following four types of key workforce stakeholders: 1) state governors' economic development and integrated state workforce plans; 2) employers and industries; 3) the public workforce

system, including American Job Centers and local workforce development boards; and 4) philanthropic, business-related, nonprofit, community, and labor organizations.[58]

The grants supported colleges' efforts to develop new and expand current partnerships with a range of external partners to enhance the quality of instruction, facilities, and training equipment and to improve outcomes for participants. As shown in table 7.3, 85 percent of Round 3 colleges initiated new partnerships or expanded existing partnerships with industry associations, employers, or chambers of commerce. They also frequently partnered with local workforce development boards and American Job Centers, community organizations or other social services agencies, career or job centers other than American Job Centers, other postsecondary institutions, and K–12 schools.[59]

TABLE 7.3
Types of External Organizations with Which Round 3 TAACCCT Colleges Developed New or Expanded Current Partnerships

Type of External Partner	# of Colleges Responding to Question	# of Colleges	% of Colleges
Industry associations, employers, or chambers of commerce	184	159	86%
Local workforce investment boards /American Job Centers	182	139	76%
Community organizations or other social services agencies	180	119	66%
Career or job centers (other than American Job Centers)	180	114	63%
Universities or other four-year institutions	178	109	61%
School districts (K–12)	183	112	61%
Economic development organizations	179	104	58%
State workforce investment boards	176	88	50%
State government agencies	180	87	48%
Community or technical colleges other than those in your consortium	177	79	45%
Local government	179	72	40%
Vocational or trade schools	175	59	34%
Philanthropic community	177	51	29%
Faith-based organizations	175	44	25%
Unions	173	18	10%
Seed and venture capital organizations or individuals, investor networks, or entrepreneurs	175	15	9%

Source: Urban Institute survey of Round 3 TAACCCT colleges, 2016–17.
Note: N=187; respondents could indicate for each factor if they had developed a new partnership, expanded current partnerships, the partnership was unchanged, or there was no partnership. A small number of colleges did not provide a response relating to each of the factors, and the number of responding colleges for each question varies.

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[58] Although all Round 3 grantees included plans to partner with all required partners in their grant applications, some partnerships did not materialize as expected.

[59] Compared to Rounds 1 and 2, a higher percentage of colleges in Round 3 developed new or expanded partnerships with local workforce development boards and American Job Centers and universities or four-year institutions. See appendix E for a comparison of Rounds 1, 2, and 3 survey results.

Many colleges worked closely with workforce development boards and American Job Centers, organizations within the public workforce system that provide a wide array of services and activities to unemployed and underemployed workers. As shown in table 7.4, the most frequently cited role for the public workforce system was as a referral source for participants. Other common services included job placement services, access to financial support for participants (e.g., Individual Training Accounts), and providing connections to employers or industry associations. Only 7 percent of colleges indicated that they received no resources or services from the public workforce system.[35]

TABLE 7.4

Resources and Services That Round 3 TAACCCT Colleges Indicated Were Provided by the Public Workforce System to Participants

Type of Resources and/or Services Provided	Percent
Referrals to your institution's grant-funded programs	72%
Job placement services	56%
Access to financial support for participants (e.g., Individual Training Accounts)	54%
Connections to employers or industry associations	54%
Advisory board/steering committee participation	48%
Career or skill assessments	47%
Job-readiness/soft-skills training	43%
TAA program services (e.g., case management)	43%
Use of facilities (e.g., space for training activities, meetings with employers, job fairs)	28%
Use of staff as counselors/navigators	22%
Mentoring	18%
Direct funding/training contracts	17%
Internships or other work experience activities	12%
Referral to or assistance developing registered apprenticeships	11%
Operation of training activities	10%
None	7%
Curriculum development	6%
Other (please specify):	2%

Source: Urban Institute survey of Round 3 TAACCCT colleges, 2016–17.
Note: N=178; nine missing colleges.

The 14 colleges visited also worked with a variety of partner types in a variety of partnership roles. The nature and intensity of involvement from external partners varied considerably across the colleges depending in part on type of training program and industry sector served, the types of individuals targeted for training, and the available partners in the service areas. All colleges partnered with local employers and the public workforce system. Additionally, nine colleges indicated that they partnered with a business, trade, or industry organization; seven colleges worked with state or local workforce development boards; and four partnered with economic development agencies. Aside from employer, industry, and public workforce system partners, colleges also worked with community- or faith-based organizations (9 colleges); education providers outside of their college or consortium (7 colleges); and

various organizations providing direct technical assistance on one or more key components of their project (4 colleges). Partners also included a public library providing career services to participants, a city government helping administer a local project, and a public relations firm serving as an intermediary to local industries.

Employer partners provided curriculum input, instructions, work-based learning opportunities, and employment for participants. Employers also served on college program advisory boards, advocated for prior learning assessment and local hiring policies, gave presentations to participants, co-hosted events and attended job fairs, and helped with job placements. (More details on the roles of employer partners are described in the employer engagement section below.) Business, trade, and industry organizations helped build awareness about the local grant project and assisted with program development; they also provided safety training and simulation activities. Economic development agencies helped connect colleges to employers, assisted with program planning, and served on advisory boards.

Table 7.5 describes the major roles of the public workforce system for the colleges visited. Six colleges worked in close collaboration with local workforce development boards to develop and implement local projects. The colleges worked with local boards as follows:

- Missouri State University-West Plains worked closely with their local board to address plant closures and identify TAA-eligible workers, and the local board director was part of the project's advisory board.

- University of Vermont worked with the Vermont Department of Labor's Rapid Response team to identify individuals affected by mass layoffs who could benefit from grant-funded programs.

- Midlands Technical College worked closely with the local boards serving the same areas of their consortium-member colleges; the local boards helped with planning, provided letters of support, and conducted outreach efforts to identify candidates for recruitment and enrollment in the grant-funded programs.

- The workforce development board working with Madison College had a WorkSmart Network office on campus to provide career training and other employment supports for participants.[60]

- Lewis & Clark Community College worked with two local boards, both of which funneled people to their grant-funded programs and provided some participants with support services while they were enrolled in training.

- The Community College of Baltimore County met regularly with their local board and relied on them to identify individuals in need of training.

- For Long Beach Community College, the local board, Pacific-Gateway Workforce Investment Network, served as a city-contracted partner and provided all the case management,

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[60] The WorkSmart Network is an initiative supported by the Workforce Development Board of South Central Wisconsin that specializes in delivering innovative workforce services and solutions to prepare workers for the needs of business and industry. For more information, visit http://www.worksmartnetwork.org.

recruitment, and screening for the grant; the college itself served mainly as the training provider.

TABLE 7.5
Activities of Public Workforce System Partners for Round 3 TAACCCT Colleges

| TAACCCT College | Public Workforce System | | | |
| | Coordin-ated with WDB | Referred TAACCCT participants to/from AJC | | Other |
		Received Referrals	Gave Referrals	
Lewis & Clark Community College	✓	✓	✓	
Hinds Community College		✓		
Midlands Technical College	✓	✓		
Wallace Community College Selma		✓		
Northcentral Technical College District		✓	✓	College instructor worked part-time at AJC
Madison College	✓	✓	✓	WDB WorkSmart Network office on college campus provided training and supports
Front Range Community College		✓	✓	
Pikes Peak Community College		✓		
Missouri State University-West Plains	✓	✓	✓	
North Dakota State College of Science		✓		
Long Beach City College	✓	✓		The city contracted with the local board to provide case management and supports for grant
University of Vermont and State Agricultural College		✓	✓	Vermont DOL was a key partner for the grant
Community College of Baltimore County	✓	✓		College provided AJCs with resources and access to subject matter experts so clients can learn about cybersecurity opportunities
Mesa Community College		✓	✓	

Source: Urban Institute TAACCCT Round 3 site visits, 2017.
Notes: AJC=American Job Center; DOL=Department of Labor; WDB=workforce development board.

The colleges visited also partnered with American Job Centers, often to refer individuals to the grant-funded programs. However, the degree to which the partner American Job Centers did so varied greatly, with some colleges receiving many referrals and some reporting very few and possibly none, in one case. Colleges receiving substantial numbers of referrals tended to have close working relationships with the public workforce system prior to the start of their local project. In at least one case, a college

was successful in getting its grant-funded programs added to the American Job Center's eligible training provider list during its involvement with the project. At least seven of the colleges also referred participants to American Job Centers for services or funding. Northcentral Technical College District had an instructor working part-time at an American Job Center. The Community College of Baltimore County provided American Job Centers with information and resources about their grant-funded programs as well as access to subject matter experts who could explain cybersecurity career opportunities to clients.

Community- and faith-based organizations played a variety of roles across nine of the colleges visited. These roles included recruitment of individuals targeted or served by these organizations, providing support services for participants, providing participants with scholarships and facilitating local industry networking, such as for advanced manufacturing at the CHAMP consortium colleges in Colorado. Populations served by community organization partners included veterans, minorities, immigrants, women, older workers, and formerly incarcerated individuals. Supportive services provided by community organization partners included case management, employment services, vocational rehabilitation, and funding for training, fees, books, and equipment. Public service agencies partnering with the BOOST program provided wraparound services and case management for TAACCCT participants participating in Project Hope, a Health Profession Opportunity Grant program targeting Temporary Assistance for Needy Families recipients and other low-income individuals. The Department of Human Resources worked with Wallace Community College Selma to help TAACCCT participants access child care. Front Range Community College formed a new partnership with the Pearl Group, a nonprofit serving single parents that facilitated women-only advanced manufacturing classes and provided supports such as transportation and financial assistance.

Half of the colleges visited partnered with education providers outside their college, and sometimes outside of their consortium. Some colleges worked with high school superintendents, principals, and guidance counselors to recruit participants for grant-funded and other programs. An alternative high school education provider also recruited participants for grant-funded programs at Long Beach Community College. Several colleges partnered with four-year colleges and universities to develop articulation and transfer agreements or design curriculum. A technical college specializing in internships and apprenticeships partnered closely with University of Vermont on program design, employer engagement, and work-based learning opportunities. Mesa Community College worked with their community college district governing body on grant application development, coordination with other colleges in the district, and sustainability planning.

Four of the colleges visited partnered with national technical assistance providers, including the Council for Adult and Experiential Learning, the National Network for Sector Partners, the American Council on Education, and the Cooperative Education and Internship Association. These national organizations assisted colleges with developing prior learning assessment policies and procedures, employer and industry partnerships, and internship opportunities. An instructional software design company (curriculum development) and a local public relations firm (employer and industry outreach) also provided technical assistance to some colleges.

7.3 Employer Engagement

The Round 3 grant announcement required grantees to partner with at least one employer for each targeted industry in each location serving participants. The grant announcement specified the roles for employers as follows:

> The employer partner must be actively engaged in identifying the necessary skills and competencies for the program(s) and must assist with curriculum development and program design, as well as participate in one or more of the following ways: a) helping define the program strategies and goals; b) providing resources to support education/training (such as equipment, facilities, instructors, funding, internships, apprenticeships, and other work-based training opportunities, where applicable); and c) committing to hire, promote, and/or retain qualified program participants.

All colleges visited met these requirements, though the number and strength of employer partnerships varied substantially across sites. Employer partners at the 14 colleges reflected the diversity of the training programs. Employer partners interviewed or discussed in interviews included:

- health care providers (including hospitals)
- transportation and logistics companies (including trucking and river-barge companies)
- manufacturers (specializing in a variety of areas like steel, aviation, trailers, dental products, and heating systems)
- information technology companies (as well as finance and education employers with cybersecurity or networking needs)
- construction companies
- automotive companies

This section discusses how colleges engaged employers in their local projects, specifically how the colleges formed and developed employer partnerships and the roles employers played in planning, implementing, and supporting the projects.[61]

Forming and Developing Partnerships with Employers

The colleges visited used a variety of strategies to build employer partnerships. All the colleges had some employer partners prior to the grant; most colleges had established advisory boards, which included members from the industry. However, at most colleges, staff reported that they needed to conduct outreach to obtain additional employer partners to help with designing and implementing the programs of study. At Northcentral Technical College District and North Dakota State College of Science, instructors effectively brokered new employer relationships because of their numerous industry contacts. At Missouri State University-West Plains, the outreach specialist was responsible for contacting industries to develop new partnerships. At other colleges, several staff members reported working on employer engagement. At Mesa Community College, the project director, career navigator, and instructors all spent many hours building connections with industries through networking. The project director attended numerous meetings in the region with potential partners, and staff offered tours of the college training facilities to pique employers' interest, generating over 100 new employer partnerships under the grant.

Other colleges solicited outside help engaging employers. The Mississippi River Transportation, Distribution and Logistics consortium, led by Lewis & Clark Community College, worked with a technical assistance provider to enhance its ability to attract and retain employer partners. Long Beach Community College contracted with a firm to reach out to local industries and identify potential employers and job placements for program graduates. Per the project staff, the firm provided "additional capacity to serve our folks [employers]. The idea being that it would offset some of the legwork [the college would] have to do." This firm acted as an intermediary between the college and employers, helping the college obtain more employer partners than it would have otherwise. Though these kinds of arrangements had mixed success, they represent a unique way for colleges to expand their capacity to develop employer partnerships.

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[61] For additional information on how successful college-employer partnerships were built as a part of the TAACCCT grant program, please see a report from the TAACCCT national evaluation entitled, "The Employer Perspectives Study: Insights on How to Build and Maintain Strong College-Employer Relationships," at https://www.dol.gov/asp/evaluation/completed-studies/Employer-Perspectives-Study-Report-Round-Final.pdf.

Once colleges established employer partnerships, project staff used different approaches to build and sustain relationships. In addition to their participation in advisory board meetings, employers interacted with project staff on an individual basis. Staff at several colleges said they talked to employers frequently. At Hinds Community College, the project director was in contact with the key employer daily, as that employer was very involved in one of the two grant-funded programs offered by the college, providing training, the training facility, and the required equipment. At Wallace Community College Selma, project staff held weekly check-ins with employers who were hosting clinical placements for participants in the health care programs. For most colleges, staff were in contact with employers as needed between advisory board meetings. Frequently, project staff gave tours of the training facilities or visited employer sites to stay in contact.

Employer Roles

Employer played varying roles in the local projects at the 14 colleges, ranging from: serving on an advisory board, assisting with curriculum design and credentials, providing guidance on equipment purchase for college shops and laboratories, providing career networking and transition opportunities, speaking in classes and to individual students about career pathways within their industry and/or company, hiring participants, and sending incumbent workers to be trained at grant-funded programs. Table 7.6 presents the roles played by employers in each of the colleges visited.

Employers usually provided input on grant-funded programs through advisory board meetings or through individual calls and meetings. All but one of the colleges had employers serve on advisory boards that typically met once or twice a year. Most colleges also received advice from employers as needed throughout the rest of the year. Employers shared information about their need for new workers (currently and in the future), as well as the types of skills and credentials likely to be needed.

Colleges often consulted employer partners on curriculum, credentials, and equipment purchases. All the colleges reported giving input on curricula for the grant-funded programs and employers at 12 colleges reported giving input on credentials. At Mesa Community College, for example, employer input spurred the college to pursue National Institute for Metalworking Skills accreditation for the advanced manufacturing programs. At nine of the colleges, employer partners also gave input on equipment purchases, helping the colleges identify equipment for shops and laboratories that were in use within the industry sector and/or relevant to building skills needed once on the job.

TABLE 7.6
Roles of Employer Partners for Round 3 TAACCCT Colleges

TAACCCT College	Employer Partner Roles					
	Serve on Advisory Board	Assist with Curriculum Design and Credentials	Provide or Donate Equipment	Provide Career Networking & Transition Opportunities	Hire Participants	Send Their Employees for Training
Lewis & Clark Community College	X	X	X	X	X	
Hinds Community College	X	X	X	X	X	X
Midlands Technical College	X	X		X	X	
Wallace Community College Selma	X	X		X	X	
Northcentral Technical College District	X	X		X	X	
Madison College	X	X	X	X	X	
Front Range Community College	X	X	X	X	X	X
Pikes Peak Community College	X	X	X	X	X	
Missouri State University-West Plains	X	X		X	X	X
North Dakota State College of Science	X	X	X	X	X	X
Long Beach City College		X		X	X	X
University of Vermont	X	X		X	X	
Community College of Baltimore County	X	X		X	X	
Mesa Community College	X	X	X	X	X	X

Source: Urban Institute TAACCCT Round 3 site visits, 2017.

In addition to providing advice and insights into industry needs, employer partners at eight colleges also made monetary and in-kind contributions. Seven of the colleges had employer partners that donated or paid for new or used equipment. At North Dakota State College of Science and Madison College, for example, employer partners sold the colleges computer equipment at discounted rates. Six colleges had employer partners that made other kinds of contributions, including donating land and training space; paying for tuition, stipends, or testing fees for participants; and providing instructors or paying instructors. See box 7.1 for a description of Hinds Community College's partnership with a trucking company that made substantial investments in the program.

BOX 7.1

Hinds Community College Partnership

Hinds Community College partnered closely with KLLM, a long-haul trucking firm specializing in the transport of perishable commodities throughout the United States and Mexico. KLLM was instrumental in the design, financing, and day-to-day operations of the truck-driver training program, one of two primary, grant-funded programs at Hinds Community College. KLLM paid for advertisement and other outreach activities, conducted screening and intake for new recruits, paid participant stipends for completion of training activities, provided internships for all participants obtaining their commercial driver's licenses, and guaranteed program participants a job if they obtained their commercial driver's license and completed their internships. KLLM bought the land and built the school where the truck driver training academy was held, bought the equipment (including 10 tractor trucks and 2 simulators used for instruction), and provided input on the training curriculum for the 22-day training program and the 6- to 8-week internship that followed training. KLLM also provided the instructors for both the classroom and internship portion of the program and paid the salaries of a navigator and the training program director, though grant funding was used to reimburse KLLM for the wages of 8 to 11 classroom instructors. Because of this strong employer partnership, Hinds Community College was able to enroll nearly 1,000 new trainees annually into its grant-funded program, with classes of about 20 new recruits enrolling each week of the year.

Source: Urban Institute TAACCCT Round 3 site visits, 2017.

At some colleges, employers would come classes and events to meet and offer networking opportunities for participants. Most of the colleges held job fairs or career fairs that employers attended. At Community College of Baltimore County and Mesa Community College, employers visited the programs as guest speakers or to talk to participants informally about their industries. Community College of Baltimore County held career days where employers came in to talk to participants about being a cybersecurity professional. Pikes Peak Community College held "manufacturing mixers." At Midlands Technical College, employers attended graduation pinning ceremonies. Employer partners at four colleges regularly offered tours of their facilities to participants. Finally, three colleges reported that employers participated in mock interviews to help participants prepare for their job search.

In the focus groups, participants described the benefits of these networking opportunities. At Front Range Community College, participants reported obtaining internships or opportunities to apply for jobs after meeting employers who visited their program. One participant said that because employers visited the classes, participants can get a good sense of how different employers operate and what to expect in the workplace. Participants saw career fairs as an effective way to meet with and talk to people from the industry.

I have a job at a local company now, and everything [our instructor] said about what we would need to know is true. Everything I was taught here directly applies to my job.

—TAACCCT Participant

Employer engagement was also geared toward finding participants jobs after program completion. All the colleges had partners that were willing to consider program graduates for open positions and had hired from the programs. However, only three colleges, Midlands Technical College, Wallace Community College Selma, and Hinds Community College, had employer partners that committed to hire participants if they met the requirements and successfully completed the program.

Six colleges sent their own employees for training at the local colleges. At Hinds Community College, all the participants in the river-barge training programs had been hired by three employer partners prior to enrolling in the program. Employers also sent their own employees for training at Front Range Community College (advanced manufacturing), Missouri State University-West Plains (technology and machining), North Dakota State College of Science (advanced manufacturing), Long Beach Community College (heavy duty preventative maintenance and alternative fuels), and Mesa Community College (advanced manufacturing). These arrangements increased enrollment and revenue for the college and helped these employees progress along a career pathway.

7.4 Partnership Successes and Challenges

Round 3 colleges experienced many successes, as well as challenges, as they built their partnerships to support their local projects. About three-quarters of colleges believed that they were either somewhat or very successful in communicating with partners, worked with partners while making program changes, and engaged partners throughout the grant period (see table 7.7). However, less than half thought they were successful or somewhat successful in accessing resources from partners that colleges could leverage to enhance the grant activities.

TABLE 7.7
Ratings of Success of the Various Partnership Activities by Round 3 TAACCCT Colleges

Type of Partnership Activity	# of Colleges Responding to Question	# of Colleges Rating Activity as Very Successful or Somewhat Successful	% of Colleges
Communicating with partners	184	149	81%
Working with partners while making program changes	185	145	78%
Engaging partners throughout the grant period	184	136	74%
Accessing planned leveraged resources	181	87	48%

Source: Urban Institute survey of Round 3 TAACCCT colleges, 2016–17.

Note: N=187; colleges could indicate for each type of partnering activity that it had been very successful, somewhat successful, a little successful, not at all successful, too soon to tell, or not applicable. A small number of colleges did not provide a response on each type of partnership activity, thus, the number of responding colleges varies slightly by type of partnering activity.

According to the colleges surveyed, partnerships with several various entities were critical to successfully serving participants and ensuring positive programmatic outcomes. As shown in table 7.8, colleges thought they were largely successful in supporting and strengthening partnerships across the organizations they worked with under the grant, particularly with employers and industry associations. About half of colleges believed that had supported and strengthened partnerships with the following organizations: the public workforce system, high schools, and institutions of higher education (i.e., four-year colleges and universities, community and technical colleges).

TABLE 7.8
Ratings of Success in Supporting and Strengthening Partnerships with Various Types of Organizations by Round 3 TAACCCT Colleges

Type of Partnering Organization	# of Colleges Responding to Question	# of Colleges Rating Partnering Very Successful or Somewhat Successful	% of Colleges
Employers or industry associations	185	160	86%
Public workforce system	184	100	54%
Secondary schools (high schools)	183	98	54%
Institutions of higher education (four-year colleges and universities, community and technical colleges)	184	93	51%
Other training providers (community-based organizations, trade schools, etc.)	182	73	40%

Source: Urban Institute survey of Round 3 TAACCCT colleges, 2016–17.

Note: Total number of colleges surveyed is 187; colleges could rate their success in terms of supporting or strengthening partnerships with various types of organizations as follows: very successful, somewhat successful, a little successful, not at all successful, too soon to tell, or not applicable. A small number of colleges did not provide a response on each type of partnering organization, thus, the number of responding colleges varies slightly by type of partnering organization.

Successes and Challenges in Engaging Employer and Industry Partners

Discussions with project staff at the 14 projects visited support the survey findings of colleges' success in developing and sustaining partnerships, particularly with employers. Most project staff reported being very positive about their partnerships with employers and the perceived impact of their relationship on the projects. Staff reported that working with employers increased the alignment of the programs of study to fit employers' needs and resulted in better placements for program graduates. The colleges trained participants on the equipment employers used, awarded certifications and credentials that were most valued by employers, and incorporated a continuum of basic and soft skills to specialized skills employers desired.

Yet, the colleges faced some challenges in building and sustaining employer engagement with their grant-funded programs. For example, although employers were willing to provide input through advisory board meetings, project staff at one college found it difficult to get employers to commit to interviewing or hiring participants or to making monetary or in-kind donations. At two colleges, staff reported that advisory board attendance dwindled over time. Several colleges reported that they sometimes struggled to meet the needs of diverse employers with different training priorities and preferences. In addition, some colleges reported that they had received commitments for partnering and/or providing hiring opportunities from firms during the grant application or planning process, but over time, these employers were unresponsive, and, in some cases, needed to be replaced by other interested (and hiring) firms.

Partnership with industry means [keeping] conversations open, which leads to teamwork and collaboration, which opens doors for students and opportunities for jobs. Employers hire graduates. [We] keep employers up to speed, and employers are a huge support for the college at legislative sessions to promote the funding of technical programs. [We] would not have gotten the grant without industry support. Employers help keep the programs up to speed. There are unique benefits to each employer relationship.

—TAACCCT Staff

However, employers and staff expressed some frustration that the colleges could not always adapt to the employers' needs as quickly as they would like. Several employers noted that the pace of the

business world is often faster than the colleges can keep up with. Colleges trained for information technology jobs had difficulty adapting to rapidly changing technology used by employers. One employer stated, "Business requirements shift and change. They don't always align with the [education] side. [This is] a byproduct of anyone working with education. And trying to marry the business objectives with the education side. They have to prepare [educational] materials so far in advance. It's very challenging. There's no clean answer to fixing it."

In addition, delays in gaining approval for equipment purchases, budgets, or other plans were sometimes a challenge in partnering with employers. In one instance, after months of delay in gaining approvals needed for purchase of a much-needed equipment item for an advanced manufacturing training program, an employer went ahead and purchased the equipment because the employer did not want any further delays in training potential employees. At another college, some employers ended their involvement because of administrative delays.

Successes and Challenges of Other Partnerships

The colleges visited also reported partnership benefits related to alignment with other systems, such as the public workforce system and state university system. They also voiced the benefits of building relationships with the public service agencies and community organizations that provided low-income participants with much-needed services and supports. Several colleges stressed the importance of American Job Center services and funding to fill in the gaps for needs that grant funds could not cover, such as tuition. Several colleges benefited from collaborating with other training providers, which allowed local projects to better serve participants and industries by building on the existing expertise and resources of those providers. Colleges also stressed how some partnerships really boosted outreach to and recruitment of participants, including those with American Job Centers and training providers.

Several colleges reported challenges related to partnerships with the public workforce system. At least two colleges experienced resistance related to recruiting public workforce clients for programs taking place in formal education settings versus programs geared towards more traditional job training. Several colleges did not receive referrals from American Job Centers as they had hoped, and at least one college struggled to get their programs listed on the local workforce development board's eligible training provider list. Colleges experiencing more success with public workforce system partnerships reported struggling with the system's inability to provide extra services for clients ineligible for Workforce Innovation and Opportunity Act funding.

8. Sustainability of the TAACCCT Projects

One of the key challenges for the TAACCCT colleges was how to sustain the successful components of a project once the grant ended. Colleges serving as the lead grant organizations had to develop a sustainability plan as a part of their application, using data to determine which strategies and activities were effective and how they would integrate them into their programs. These plans also had to describe how they would sustain partnerships throughout the grant and after it ended. This chapter reviews what aspects of their projects the Round 3 colleges planned to sustain toward the end of the grant. It also highlights the perspectives of project directors from the colleges visited on the feasibility of sustain key components of their projects.

These are the key findings from this chapter:

- The vast majority of colleges surveyed planned to sustain credentialing and career pathways, course scheduling, and technology-enabled learning strategies, including stackable and latticed credentials and online learning. A high percentage of Round 3 colleges would continue their college persistence and completion strategies after the grant ended. Articulation of grant-funded programs to more advanced programs was the most common persistence and completion strategy that colleges planned to sustain. All strategies to support connections to employment were likely to be continued after the grant ended, with clinical placements and work simulation activities with the highest percentage of colleges.

- The colleges surveyed indicated that they planned to sustain many internal and external partnerships after the grant ended. Over 80 percent of colleges indicated that they would continue partnerships with all types of departments and offices within their college. Plans to sustain partnerships with external organizations were less consistent than with internal partners and emphasized the strong role of employers and industry after the grant ends. Over 90 percent of colleges planned to sustain partnerships with industry associations, employers, and chambers of commerce, a sign that the grant program's emphasis on employer and industry partnerships would have some lasting effect. Project directors at the colleges visited cited maintaining partnerships with employers and community organizations as key to sustainability.

- The colleges surveyed also noted the challenges they expected in sustaining grant activities. Insufficient funding was the most common challenge to sustaining their grant activities. All colleges visited indicated that they planned to sustain at least one or more components of their grant-funded programs in the short term. Most project directors noted that they were in the process of identifying and applying for additional grants to help with sustainability. However, many project directors expressed concern with finding funds to sustain their programs.

The Round 3 colleges surveyed reported on plans to sustain grant-funded programs and their strategies to accelerate learning, support persistence and completion, and connect participants to employment towards the end of their grants. As shown in table 8.1, the vast majority of colleges planned

to sustain credentialing and career pathways, course scheduling, and technology-enabled learning strategies. One type of accelerated learning strategy—prior learning assessments—did not fit this pattern. Similar to the earlier rounds, most Round 3 colleges planned to sustain the policies they put in place to award credit for prior learning and work experience but only about a quarter planned to continue using the prior learning assessments they had developed as a part of the grant. It is difficult to know exactly why this would occur but many of the colleges that developed prior learning assessments may not have established internal policies about awarding credit for these assessments, thus making the assessment not a useful tool for future students.

TABLE 8.1
Round 3 TAACCCT Colleges' Plans to Sustain Accelerated Learning Strategies

Accelerated Learning Strategy	# of Colleges Responding to the Question	% of Colleges that Plan to Sustain Strategy
Credentialing and career pathways		
Stackable or latticed credentials	152	93%
Development of industry-recognized credentials	116	90%
Design of new career pathway program	105	84%
Course scheduling		
Modular or chunked course	73	85%
Asynchronistic scheduling	34	79%
Self-paced learning	43	70%
Technology-enabled learning		
Online teaching/learning	111	94%
Hybrid learning strategies	130	91%
Real-time online instruction	26	73%
Prior learning		
Credits for prior learning or work experience	62	92%
Prior learning assessments	106	24%

Source: Urban Institute survey of Round 3 Round 3 TAACCCT colleges, 2016-17.
Notes: Percentages are out of total respondents who reported implementing each strategy (see table 5.1). N=183; 4 missing colleges. Column will not add to 100 percent because users could select more than one option.

A high percentage of colleges surveyed indicated that they would continue to implement college persistence and completion strategies after the grant ended (see table 8.2). Articulation of grant-funded programs to more advanced programs was the most common persistence and completion strategy that colleges planned to sustain. Most colleges that implemented strategies that helped to strengthen participants' academic and language skills such as improvements to basic skills/adult basic education, contextualized learning, restructuring of developmental education, English as a second language instruction, and team teaching planned to sustain these strategies. Other strategies that helped to

restructure learning to support persistence and completion—specifically competency-based learning and development of knowledge, skills and abilities for programs of study—were those that most colleges planned to sustain.

TABLE 8.2
Round 3 TAACCCT Colleges' Plans to Sustain College Persistence and Completion Strategies

College Persistence and Completion Strategy	# of Colleges Responding to the Question	% of Colleges that Plan to Sustain Strategy
Articulation from programs to more advanced programs	97	93%
Improvements to basic skills/adult basic education	62	85%
Contextualized learning	63	83%
Competency-based learning	87	83%
Development of knowledge, skills, abilities, and other characteristics (KSAO)	65	80%
Restructuring of developmental education	32	78%
Improvements to English as a Second Language instruction	6	67%
Team teaching	47	62%

Source: Urban Institute survey of Round 3 TAACCCT colleges, 2016-17.
Notes: Percentages are out of total respondents who reported implementing each strategy (see table 5.2). N=183; 4 missing colleges. Column will not add to 100 percent because users could select more than one option.

Round 3 colleges also planned to sustain strategies to connect participants to employment, all work-based learning activities, at high rates (see table 8.3). While only a small portion of colleges offered clinical placements as this work-based activity only applies to health care programs, over 90 percent of colleges that offered the work-based learning activity planned to sustain it after the grant ended. Similarly, over 90 percent of colleges planned to sustain simulations, internships, and cooperative education or work-study programs that they developed as a part of the grant. Over 70 percent of colleges also planned to sustain on-the-job training, DOL-approved registered apprenticeships, and job shadowing.

TABLE 8.3
Round 3 TAACCCT Colleges' Plans to Sustain Connection to Employment Strategies

Connections to Employment Strategy	# of Colleges Responding to the Question	% of Colleges that Plan to Sustain Strategy
Clinical placements	29	93%
Simulations	106	93%
Internships	107	91%
Cooperative education or work-study program	32	91%
On-the-job training (other than registered apprenticeship)	34	79%
DOL-approved registered apprenticeships	19	79%
Job shadowing	43	72%

Source: Urban Institute survey of Round 3 TAACCCT colleges, 2016-17.
Notes: Percentages are out of total respondents who reported implementing each strategy (see table 5.4). N=183; 4 missing colleges. Column will not add to 100 percent because users could select more than one option.

Round 3 colleges also reported on partnerships that would continue after the grant ended. As shown in table 8.4, over 80 percent of colleges indicated that they would continue partnerships with all types of departments and offices within their college. These partnerships were important for building capacity within the college to serve adult learners so their continuation would sustain the changes made from the grant. These changes could include program development and enhancements, internal policies (e.g., credit for prior learning, transfer and articulation), and supports for participants.

TABLE 8.4
Likelihood that Internal Partnerships Developed or Expanded by Round 3 TAACCCT Colleges Would Continue after the End of the Grant

Internal Department or Office	# of Colleges Responding to the Question	% of Colleges that Definitely or Likely Will Continue Service After TAACCCT
Other workforce/career and technical education departments	33	97%
Information technology/computer services	88	91%
Career services	130	88%
Financial aid	74	88%
Adult education/remedial education services	90	87%
Tutoring/academic support centers	106	86%
Student support services	137	85%
Other academic departments	98	85%
College administration	107	80%

Source: Urban Institute survey of Round 3 TAACCCT colleges, 2016-17.
Note: Columns will not add to 100 percent because each row has its own N.

Plans to sustain partnerships with external organizations were less consistent than with internal partners and emphasized the strong role of employers and industry after the grant ends (see table 8.5). Over 90 percent of colleges planned to sustain partnerships with industry associations, employers, and chambers of commerce, a sign that the emphasis on employer and industry partnerships would have some lasting effect. A high proportion of colleges also planned to sustain partnerships with local workforce development boards and American Job Centers, organizations that are part of the public workforce system. At least half of colleges indicated that they planned to sustain partnerships with all other types of entities, with the exception of universities and four-year colleges and seed/venture capital organizations and investors.

TABLE 8.5
Likelihood That External Partnerships Developed or Expanded by Round 3 TAACCCT Colleges Would Continue after the End of the Grant

External Partner	# of Colleges Responding to the Question	% of Colleges Indicating Partnership Definitely Will or Likely Will Continue
Industry associations/employers/chambers of commerce	97	92%
Economic development organizations	83	88%
Vocational/trade schools	59	83%
Unions	61	80%
Local workforce development boards / American Job Centers	57	79%
School districts	78	78%
Community-based organizations/social services agencies	98	78%
State government agencies	87	76%
Career/jobs centers (not American Job Centers)	72	75%
Local government	104	69%
State workforce development boards	55	69%
Community/technical colleges outside consortium	76	66%
Faith-based organizations	59	53%
Philanthropic community organizations	92	50%
Universities/four-year colleges	35	40%
Seed/venture capital organizations or investors	56	23%

Source: Urban Institute survey of Round 3 TAACCCT colleges, 2016-17.
Note: Colleges must have previously indicated they had this partner type to be asked this question; therefore, the number of colleges for each question varied slightly. They could indicate for each partnership type that it definitely will continue, is likely to continue, unsure, is not likely to continue, or definitely will not continue.

Project directors at the colleges visited cited maintaining partnerships with employers and community organizations as key to sustainability. They thought that the grant had provided the colleges with funds and resources to cultivate these relationships. With increased resources, colleges gained

more influence in the community, and both colleges and employers looked to maintain these new relationships. Some colleges relied on these partnerships to provide supplemental funding or equipment to help sustain the program. One project director emphasized how the programs had benefited the community by increasing economic activity and by bringing new career possibilities to residents in the region. The project director hoped that their strong employer partnerships and the employers' enthusiasm would help sustain programs, despite state budget cuts. Another project director reported that they were waiting for employers to commit to the program as a sign that the program continued to be valuable to the community.

Round 3 colleges also noted the challenges they expected in sustaining grant activities (table 8.6). Insufficient funding was the most common challenge to sustaining their grant activities. Other issues included: a lack of potential participants for the grant-funded programs; staff time, including those with fundraising experience; changes in industry focus of the local community; and insufficient partner support. Twelve percent expected no major challenges to sustaining their grant activities.

TABLE 8.6
Sustainability Challenges Expected by Round 3 TAACCCT Colleges

Sustainability Challenge	% of Colleges Expecting Challenge
Insufficient funding	76%
Lack of potential participants, students	30%
Staff time, experience in fundraising	20%
Changes in industry focus	17%
Insufficient partner support	14%
No major challenges	12%

Source: Urban Institute survey of Round 3 TAACCCT colleges, 2016-17.
Notes: N=187; 0 missing colleges. Column will not add to 100 percent because users could select more than one option.

All colleges visited indicated that they planned to sustain at least one or more components of their grant-funded programs in the short term. Most project directors noted that they were in the process of identifying and applying for additional grants to help with sustainability; one project director mentioned that they were planning on using their special projects fund to cover the costs that the grant had previously covered. However, many project directors expressed concern with finding funds required to sustain their programs in the long term. One project director described this conundrum as "difficult, but we want to keep up the scope and size of programs," since the grant-funded programs became increasingly important to employers, prospective participants, and the community.

Programs that relied on technology that was likely to change noted that without the grant it would be difficult to sustain their state-of-the-art labs and equipment. Frequent updates in technology mean that equipment and software could become obsolete over time, and without large sums of money, colleges reported that they would not have the funds to buy software and equipment at a rate that would keep the program in line with industry standards.

Many colleges were tentative about sustaining staff—they wanted to but were unsure if it would be possible given budget constraints. Certain staff would be transferred to other departments within the college, such as program recruiters or advisors. Adjunct instructors were likely to end their contracts at the end of the grant period.

Finally, members of the single-state and multistate consortia developed individual sustainability plans, and several hoped to continue collaborating. One project director noted that the strategy of moving participants from training to employment would be scaled up across the college. The cultural shift of seeing community colleges as centers for workforce development rather than as a stepping stone to a four-year degree—and as places to teach participants both technical and soft skills, develop strong relationships with employers, and prepare participants for a career—was a mindset that they hope to sustain and implement in programs across the college.

Many colleges were still working on their sustainability plans at the time of the site visits, but due to budget uncertainties were unsure what aspects of the program would be continued and institutionalized. Most colleges did not think about sustainability of the projects at the start of the grant or building sustainability into the project, stating that there was so much involved with merely starting the programs. One project director noted that sustainability should have been part of the planning discussions, as not everything that was built from grant funds was sustainable.

9.   Conclusions

The TAACCCT grant program was aimed at helping community colleges across the nation increase their capacity to provide education and training for in-demand jobs, with 57 grants awarded in Round 3, reaching 187 colleges to achieve this goal. The findings in this report, based on a survey of all Round 3 colleges and visits to 14 purposively selected colleges, focus on the implementation of emerging strategies (i.e., service delivery improvement and/or system reform per the research question for this study) to build the capacity of community colleges and develop career pathways for adult learners in Round 3. The report describes the strategies Round 3 colleges implemented and the successes and challenges in implementing them. This final chapter provides an overview of key successes and challenges from the Round 3 implementation study and highlights implications for policymakers, practitioners, and others developing workforce and community college initiatives in the future.

9.1   Implementation Successes and Challenges of the Round 3 TAACCCT Grants

This section provides a summary of the key implementation successes and challenges for the Round 3 colleges to help support successful replication of the local projects (or its components) and possibly avoid the pitfalls that these colleges encountered. It draws from the findings presented throughout this report, relying on both the survey and site visit data to identify implementation successes or challenges that could be helpful for others who plan to replicate the strategies developed and implemented by the Round 3 colleges.

Key Implementation Successes

The Round 3 colleges indicated that they experienced many successes in implementing their grant projects, both in building capacity to provide education and training to adult learners and to align key partnerships across the workforce system and with industry. The key successes identified in the findings from the implementation study were:

- **The grants supported the colleges' efforts to build their capacity to serve adult learners through increased staffing, new and enhanced curricula, expanded access to student supports, and improved training facilities with updated equipment.** Based on both the survey and site visit data, colleges widely developed multiple learning and support service strategies to accelerate learning, support persistence and completion, and connect participants to employment. Most colleges surveyed and visited also developed and leveraged various

partnerships inside and outside the college to ensure the successful implementation of the strategies.

- **Most colleges visited spent a significant part of the planning phase creating new or enhancing existing curricula that would be responsive to the skill needs of employers.** Employers and industry associations helped shape curricula through their involvement in advisory committees, ensuring curricula were tailored to the skills and credentials needed for specific career pathways. Curricula also informed investments in state-of-the-art equipment. Some consortia also developed core curriculum for a career pathway that was adopted and adapted across the member colleges.

- **Over 80 percent of colleges embedded stackable and latticed credentials and over half supported transfer and articulation into programs to support advancement along a career pathway.** Colleges developed or enhanced credentials to allow participants to "stack" credentials, most commonly certificates of one year or less and professional/industry-recognized certifications. These credentials were often then linked to more advanced programs through transfer and articulation agreements as a part of a career pathway. While many of the colleges visited already had transfer and articulation agreements in place when the grant started, several colleges visited successfully developed new or strengthened existing agreements with other colleges and universities so that participants could transfer credits from the grant-funded program to a four-year institution. Some of the colleges visited also developed transfer and articulation agreements with colleges and universities across state lines.

- **The grants seemed to help colleges develop strategies to accelerate learning and improve persistence in programs of study for adult learners by creating learning environments to support participation outside of traditional classroom settings and scheduling.** Over 70 percent of the colleges surveyed developed programs that blended in-person and online courses to provide more flexibility for taking courses but also ensured that participants had hands-on practice for the skills they were learning. Programs developed by colleges surveyed also used various instructional design methods such as modular courses and self-paced learning to help adult learners, who often have work and family commitments, to have a more realistic schedule for making progress in their grant-funded program.

- **Work-based learning was a central feature of programs for many colleges to provide participants with job-related skills through hands-on practice.** Nearly 60 percent of the colleges surveyed offered internships as work-based learning opportunities for participants. Less common work-based learning opportunities included on-the-job training, clinicals, and apprenticeship. Another important way participants accessed work-based learning opportunities was the use of work simulations, for which the colleges visited purchased new training equipment and technology so participants could practice their new skills on campus or online.

- **Colleges sought to build and enhance supports for adult learners to persist and complete their programs of study, but also help them transition to new jobs or positions within their company.** Nearly 80 percent of the colleges surveyed provided career navigation, coaching, or counseling to participants to help them connect to employment opportunities. Some of the colleges visited built soft-skills training into the program curricula, focusing on workplace behavior, teamwork, attendance, and punctuality. The colleges surveyed also developed partnerships within their institution and with external organizations, most commonly with employers and industry and the public workforce system, to help participants with their employment goals. Several of the colleges visited identified a staff person to serve as an outreach coordinator, who focused on employment and internship opportunities and industry-

and community-partner relations. In each case, the project director viewed the outreach coordinator as a key element to their program's success.

▪ **Employer and industry contributions to the grant project helped colleges better align grant-funded programs with employers' workforce needs.** Staff at the colleges visited indicated that employers and industry helped support the programs by providing monetary support and training equipment, work-based learning opportunities at worksites, input on program design and equipment purchases, and hiring graduates or promoting employees who participated in the programs. According to the colleges visited, these contributions allowed colleges to increase their capacity to serve the needs of local industry and train better-prepared workers.

▪ **Colleges could also better serve participants through partnerships with other external organizations.** About two-thirds of colleges built or expanded partnerships with social service agencies and community organizations to support their participants' persistence and completion and connections to employment. Several of the colleges visited highlighted the successful relationships they built with these community partners, especially to provide low-income participants with much-needed services and supports that the colleges could not offer. In some cases, the public workforce system also filled gaps for things that grant funds did not cover, such as tuition and job readiness workshops. Other college staff noted how partnerships with American Job Centers, other training providers, and other community organizations supported outreach and recruitment.

Key Implementation Challenges

The Round 3 colleges experienced challenges in other aspects in implementing their projects such as not being able to move quickly to start the project due to institutional constraints, difficulty partnering with the public workforce system, and ensuring the sustainability of the grant activities after the grant ended. These challenges could hinder capacity building for the colleges in developing grant-funded programs, helping participants access supports, and developing partnerships with external organizations. The key challenges identified in the implementation study were:

▪ **Planning and designing grant activities took more time than the six-month planning period for the grant.** Planning and designing the grant-funded programs and other activities such as developing internal and external partnerships were important challenges noted by the colleges visited. The lengthy curricula approval process in some of the colleges visited, up to two years for credit-bearing programs in a few cases, could hinder the launch of grant-funded programs, setting back recruitment and enrollment for the college. In addition, it took time to build internal support for changing or enhancing various policies such as credit for prior learning and transfer and articulation agreements. Colleges with experience participating in prior rounds of TAACCCT tended to leverage the lessons from that experience to anticipate and proactively address challenges in the implementation of their programs in Round 3.

▪ **Challenges communicating across members of a consortium appeared to lead to uneven implementation of grant activities.** The consortium-lead colleges visited sought to overcome this issue by regularly convening project directors and staff through meetings and telephone conference calls and developing project workplans that set forth timelines and key activities. Lead colleges also provided ongoing information, such as on best practices from other colleges or engaging a national technical assistance provider, to help support successful implementation.

In general, colleges with previous TAACCCT experience felt better prepared to coordinate across member colleges.

- **Recruiting adult learners prepared for enrollment in grant-funded programs could be difficult as many had work and family commitments or low basic skills.** Across the colleges surveyed, the challenges most frequently cited were conflicts between work and school hours for participants, difficulties with identifying and finding eligible participants, and low basic skill levels of applicants. Participants at the colleges visited noted the challenges of balancing work, school, and family and that online courses were not necessarily a good substitute for face-to-face time with instructors.

- **At times, there were roadblocks to engaging new employer partners and increasing or sustaining the level of involvement of existing partners to aligning programs with industry needs.** First, some of the colleges visited found it difficult to engage employers beyond advisory group meetings, such as getting them to commit to interviewing participants or making monetary or in-kind donations. Challenges obtaining the college administration's approval for equipment purchases, budgets, or other plans were sometimes a challenge in partnering with employers, as it would cause delays in launching programs. Some of the employers interviewed expressed frustration that the colleges could not always adapt grant-funded programs to the employers' needs as quickly as they would like.

- **Partnerships with public workforce development system did not always materialize as planned.** Across the colleges surveyed, the most common resource the public workforce system provided was referrals to grant-funded programs. However, some of the colleges visited had few American Job Center customers referred to grant-funded programs. Colleges experiencing more success with public workforce system partnerships reported struggling with the system's inability to provide services for customers ineligible for Workforce Innovation and Opportunity Act funding.

- **While colleges had plans to sustain many of their programs and other activities after the grant ended, the lack of certainty around funding made it difficult to fully institutionalize various components of the projects.** The project directors interviewed indicated that course content taught by existing faculty and policies such as credit for prior learning were sustainable. However, some staff positions, such as navigators or coaches, which were integral to participant support, were not sustainable, unless these positions were absorbed into colleges' operating budgets. Some staff also thought that facility and training equipment upgrades could be sustained but rapid technology changes could render state-of-the-art equipment obsolete, requiring new investment on the part of the college and its partners.

9.2 Implications for Future Workforce and Community College Initiatives

The findings from the Round 3 implementation study offer key insights into emerging strategies that policymakers, practitioners, and others may want to consider as they develop new initiatives for educating and training adult learners. These insights build on and align with findings from other national evaluation components, including the implementation study of the Rounds 1 and 2 grants, the synthesis of the Rounds 1 and 2 third-party evaluation findings, and the employer perspectives study.

Implications from these findings may apply to future initiatives that support community colleges similar to the TAACCCT grant program but also those targeted at other education and training providers and workforce system organizations leading efforts to educate and train adult learners. This section uses evidence from the implementation study findings to present implications that are relevant for both future grantees and policymakers. The findings suggest the following:

- **Colleges may need longer planning and design periods for large-scale institutional and systems changes that TAACCCT funded.** Community colleges often had lengthy curriculum development, hiring, and procurement processes that took significant time to complete. The colleges also needed adequate planning time to permit partners that are both internal and external to the college to contribute to the design and implementation of a project. Round 3 colleges that had grants from earlier rounds believed that their ability to build off previous efforts to implement allowed for a more seamless design phase for developing programs of study, support services, and partnerships to support a quicker launch of the project.

- **It may also take time to fully implement grant activities and then realize the short- and long-term outcomes, often after the end of the grant.**[62] New policies and procedures, such as credit for prior learning and transfer and articulation agreements, took colleges time to fully implement within their institution or across colleges and for participants to benefit from them. For example, some colleges visited developed a prior learning assessment to award credit during the grant period but did have time to fully implement it with participants on a large scale. Colleges also highlighted that changing the way they serve adult learners, such as using technology for classes or to provide student supports, also required culture shift over the long run among faculty and other staff as they adapted to these new methods. Finally, the long-term educational and employment benefits of participating in the grant-funded programs could take years for participants to realize, especially if participants continued their education and training as a part of a career pathway.[63]

- **Using a range of recruitment methods and partners may be necessary to help colleges reach adult learners and meet their workforce needs.** Many colleges relied on "word-of-mouth" to recruit adult learners through existing student networks. However, colleges used other tools to recruit adult learners, especially those balancing work and family with the demands of school. Some colleges developed marketing materials that included messages about the college helping them accelerate learning, support their persistence in and completion of their program, and find a new job or get promoted in their current job to allay concerns of potential students. In addition, colleges used multiple outlets to reach potential students—whether through media (including social) or referrals from American Job Centers or employers.

- **While accelerated learning strategies can help reduce time to completion of a program, embedding flexibility in scheduling and instructional design can help students who may be combining work and school or prefer more in-person classroom time.** Some participants indicated that they struggled with courses where a lot of material was covered in a short amount of time. However, using strategies such as modular and self-paced courses seemed to allow participants to go at their own pace. Instructor availability and other academic supports

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[62] See section 1.2 for the conceptual framework that describes short- and long-term outcomes.

[63] Findings on the impact of the TAACCCT grant projects on participants' education and employment outcomes are presented in the reports synthesizing the third-party evaluation impact findings as a part of the national evaluation. However, impacts were measured within the grant period, not after, so only short-term outcomes were captured.

such as tutoring also were reported to help alleviate some of the challenges of more accelerated coursework. In addition, some participants said that they missed face-to-face interactions with their instructors when courses were all online. Hybrid courses, which mix in-person and online coursework, helped support participants who want more face-to-face interaction with instructors.

- **Efforts to collaborate across community colleges can support development of career pathways for students to help them advance in their education and in the workforce.** Cross-college or statewide coordination were reported as helping facilitate the development of curriculum and credentials for a pathway or transfer and articulation agreements to support college and career advancement. For example, statewide development of transfer and articulation policies were designed to allow for credits to transfer and participants to enroll in more advanced programs with fewer barriers. Colleges reported that developing these collaborative efforts could be a slow process for the colleges, as it could take time to develop relationships with leaders and administrators at other colleges or coordinate with the state education agency or board of regents.

- **Making sure work-based learning opportunities that are directly tied to jobs are available for students appears to require close collaboration between community colleges and employers.** Colleges developed work-based learning at worksites as a valuable way for participants to build and practice occupational skills and gain exposure to workplace culture. To do so, colleges had to conduct targeted outreach to and build relationships with employers. They also had to engage employers in developing simulated work experiences provided on campus or online to ensure the experiences supported development of skills that they needed. Colleges found that having a coordinator on staff to lead outreach to and maintain relationships with employers supported development of work-based learning opportunities, whether they were on a worksite or in a simulated setting.[64]

- **Ensuring access to financial and personal supports can help adult learners that may have difficulty participating in education and training due to financial constraints or transportation or child care needs.** For participants, a common challenge was the financial and personal barriers to participating in education and training. Participants and college staff reported that enrolling in education and training programs often took time away from work and family and could cause financial strain for participants. Many colleges facilitated access to supports participants needed to persist in and complete their programs. Colleges also developed and enhanced partnerships within their institution (e.g., financial aid office) and with community organizations and social service agencies to offer needed supports such as federal financial aid, scholarships, transportation, and child care for adult learners.

- **Career navigators (or coaches or counselors) can develop connections to employment for students, in addition to supporting college persistence and completion.** Colleges brought on navigators to support participants' persistence and academic success, offering guidance on career pathways and coursetaking, proactively checking on participant progress, and intervening when needed. But one of their main roles was to help participants successfully transition to the workforce by providing career services such as counseling and assessment, job search assistance, and professional skills training. In some cases, they coordinated with staff at American Job Centers to work with participants. Navigators would also help participants line up work-based learning opportunities at an employer site.

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[64] For more insight on employers' perspectives on relationships with community colleges, see Scott et al. 2018.

- **Planning with college leadership early in the grant can help colleges ensure that capacity-building activities are sustained and institutionalized after the grant ends.** Project directors recommended working upfront with college leadership on sustainability planning, because the colleges ultimately needed to secure ongoing funding for programs, faculty and staff, and training facilities and equipment. Some activities such as internal policy changes did not require additional funding but needed leadership support to continue their implementation. When project staff focused on sustainability and emphasized it from the beginning of their grant, it gave them time to work with college leadership on continued investments in programs and to institutionalize policies, partnerships, and student supports.

Replicating and improving on the strategies and experiences of the TAACCCT grantees across all rounds can inform future grant initiatives to build the capacity of community colleges to serve adult learners. This report builds on a report on the Rounds 1 and 2 colleges as a part of the implementation study and is followed by a similar report on the Round 4 colleges, based on the survey findings. There are two reports synthesizing the Round 3 third-party evaluation findings, one on the implementation findings that focuses on the systems changes grantees made to build their capacity to serve adult learners and one on the impact findings that focuses on participants' educational and employment outcomes.[65] A report synthesizing the Round 4 third-party evaluation implementation and impact findings builds on other synthesis reports. Other publications from the national evaluation—a series of briefs providing an overview of the grant program, a synthesis of the Rounds 1 and 2 third-party evaluation findings, findings from an outcomes study of nine Round 4 grantees, and an employer perspectives study—are also available or being developed. These reports are designed to support learning across the grant program to draw lessons and implications for future community college and workforce initiatives that support career pathways and capacity-building efforts at community colleges.

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[65] 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.

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

The full WIOA 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

	Round 1	Round 2	Round 3	Round 4
Number of grants	49	79	57	71
Period of performance	October 2011 to September 2014 (originally 36 months; extended by 6 months for 12 grants and by 12 months for 37 grants)	October 2012 to September 2016 (final six months of grant period used for reporting and evaluation activities only)	October 2013 to September 2017 (final six months of grant period used for reporting and evaluation activities only)	October 2014 to 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	Online learning	Online learning	Employer-sponsored, work-based training	Sector-based systems change

	Round 1	Round 2	Round 3	Round 4
Additional areas of focus, core elements, and priorities[a]	Evidence-based design: use moderate or preliminary evidence to develop program designs and strategies	Evidence-based design: use existing or preliminary data to develop new strategies or use strong or moderate evidence to support replication of existing evidence-based strategies	Evidence-based design: use existing or preliminary data to develop new strategies or use strong or moderate evidence to support replication of existing evidence-based strategies	Evidence-based design: use existing or preliminary data to develop new strategies or use strong or moderate evidence to support replication of existing evidence-based strategies
	Accelerated progress for low-skilled and other workers: redesigned developmental education; contextualized learning; augmented student services; enhanced relationships with community organizations to provide support services	Stacked and latticed credentials: interoperable programs; course clusters for credentials; stackable certifications, certificates, and diplomas; competency-based assessments; entrepreneurship; outcomes-based approaches	Stacked and latticed credentials: 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	Stacked and latticed credentials: 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
	Programs that meet industry needs, including career pathways: 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	Transferability and articulation of credit: increased cooperation among institutions on postsecondary career and technical education, preapprenticeship, and apprenticeship programs; credit transferability and articulation	Transferability and articulation of credit: 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	Career pathways: 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

	Round 1	Round 2	Round 3	Round 4
	Strengthened online and technology-enabled learning: 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	Advanced online and technology-enabled learning: 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	Advanced online and technology-enabled learning: 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	Advanced Online and Technology-Enabled Learning: 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
	Improved retention and achievement rates and reduced time to completion: self-paced learning; block scheduling; modular curricula; articulation processes or agreements for matriculation to four-year institutions; learning communities; restructured course scheduling	Strategic alignment: programs aligned with: (i) at least one employer for each targeted industry; (ii) the public workforce system; and (iii) educational institutions and other organizations	Strategic alignment: 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 organizations, or labor organizations	Strategic alignment: 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 organizations, or labor organizations
			Alignment with previously-funded TAACCCT projects: 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	Alignment with previously-funded TAACCCT projects: 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

	Round 1	Round 2	Round 3	Round 4
			Sector strategies: use real-time labor market information and engage employer and industry partners	Sector strategies and employer engagement: 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

Sources: TAACCCT Rounds 1-4 grant announcements.

Note: [a] Areas of focus for Round 1 grants were considered "voluntary" in the grant announcement rather than required.

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, select group of TAACCCT grants (see next section on structured fieldwork), the survey collected responses to questions from all Rounds 3 TAACCCT colleges. The survey questions were designed to assess the extent to which the TAACCCT colleges implemented activities that met the three overarching goals set forth in the original grant announcement: 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 reemployment 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 3 survey from September–December 2016. One hundred eighty-seven (187) institutions completed the survey across 57 Round 3 TAACCCT grants, a 100-percent response rate. Across the Round 3 colleges, 80 percent were part of a consortium of two or more partnering organizations. The proportion of institutions that were involved in a consortium decreased from Rounds 1-2 (88 percent) to Round 3 (see appendix table E.1). Appendix E provides additional comparisons between Round 1-2 and Round 3 colleges surveyed.

Round 3 Grantee Selection for Site Visits

The 10 grantees selected for fieldwork reflect a variety of grant structures, funding amounts, industries of focus, and geographic locations. They cover 12 states and include 6 single-institution grantees, 2 single-state consortium grantees, and 2 multistate consortium grantees, as shown in table 3.1. The four-year grant awards ranged from $2.5-2.8 million for single institutions to $23.2-25.0 million for consortia. The 10 grantees provided education and training programs offering career pathways in multiple high-demand industry sectors. The grantees 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 participant retention, academic achievement, and employment. Appendix D provides brief descriptions of the 10 selected grantees and their TAACCCT projects.

Appendix D. Descriptions of 14 Selected TAACCCT Grantees

Single Institution Grant Colleges

Community College of Baltimore County is a two-year community college serving the Baltimore metropolitan area near federal agencies and contractors that focus on information assurance/cybersecurity. The Community College of Baltimore County's mission is to "transform lives by providing an accessible, affordable, and high-quality education that prepares students for transfer and career success, strengthens the regional workforce, and enriches our community." The TAACCCT grant project's overarching goals are to expand training access and capacity in cybersecurity, accelerate training completion time, and better align their cybersecurity program's curriculum with industry standards.

Long Beach City College is a community college comprised of two campuses within a single college district, located in Long Beach, California. Long Beach Community College received a single-institution Round 3 TAACCCT grant award, which was used to create a construction preapprenticeship program and heavy duty preventative maintenance and alternative fuels training program at the Long Beach Community College Pacific Coast campus. Long Beach Community College initially designed their TAACCCT program as an alternative pathway program to engineering education and careers but had to completely reboot the program and scope of work in response to numerous layoffs at a major employer partner. Long Beach Community College used the TAACCCT funds to design short, noncredit construction and heavy duty programs with the goal of preparing Long Beach area residents for union apprenticeships, employment in the construction trades, and other career opportunities as heavy duty alternative fuels technicians and mechanics.

Mesa Community College is a two-year community college with a campus in Mesa, Arizona located outside Phoenix. Mesa Community College was awarded a state-designated, single-institution grant for $2.5 million in Round 3. Mesa Community College serves 25,000 students and is part of the Maricopa Community College District, which includes 10 community colleges and is among the largest in the country. Focused on training participants in the advanced manufacturing and aerospace industry, the Arizona Advanced Manufacturing Institute was formed to better connect education and industry, particularly small- and medium-sized companies. Key goals of Arizona Advanced Manufacturing

Institute were to serve participants, strengthen the connection to industry and economic development, and bring siloed programs together into a cohesive program.

Missouri State University-West Plains is a two-year, open-admission campus of the Missouri State University System, serving the area served by the South Central Workforce Investment Board. The goals of the $2.5 million TAACCCT grant were to develop and expand programming in health services, agriculture, and alternative energy/manufacturing that are critical to the 12-county Missouri South Central Workforce Investment Board region and respond to local TAA plant closures. A key goal was to expand the college's capacity to provide workforce development training and stackable certificate programs; serve TAA-eligible, traditional, and nontraditional students, and establish strong partnerships with the workforce development boards and area employers.

North Dakota State College of Science is a two-year community college with campuses in Wahpeton and Fargo, which are both key manufacturing hubs. Part of the North Dakota University System, it is the oldest college in North Dakota and has a statewide mission to train the workforce. The college serves 3,000 students. Through their $2.7 million TAACCCT grant, the college implemented the North Dakota Advanced Manufacturing Skills Training Initiative. Project goals were to increase the number of instructors that have industry certifications; expand facilities; increase the number students receiving industry-standard training in welding, precision machining, and, mechatronics; and meet the demand of regional employers for skilled entry-level workers and incumbent worker training.

University of Vermont is a four-year university located in Burlington, Vermont awarded a single-institution grant in Round 3. Under its TAACCCT- funded initiative, STEM Connect: Career Training in the STEM Discipline, University of Vermont expanded STEM educational opportunities for traditional and nontraditional students and helped students find career opportunities in the field. The university developed and improved several certificate programs under the grant, including: preactuarial sciences, complex systems, web and software development, and cybersecurity.

Consortium Colleges

Front Range Community College, was part of the CHAMP grant, a single-state consortium of seven community colleges, one technical college, and one four-year university. Although Front Range Community College served as the lead institution for grant application purposes, grant activities and data collection were managed by the Colorado Community College System administrative offices in Denver. The primary goal of the CHAMP consortium project was to increase the attainment of manufacturing degrees and certificates that align with industry-recognized competencies, skills, and

certifications, creating a pipeline of highly qualified advanced manufacturing industry workers in Colorado. Front Range Community College's local TAACCCT project included both credit and noncredit options for machining and was developed in close collaboration with employer partner.

Hinds Community College, the largest community college in the state of Mississippi, serves approximately 32,000 students in academic, career/technical, workforce, secondary, and adult education programs each year. With six locations, the college draws students from more than 70 Mississippi counties and ranks as the fourth-largest institution of higher learning in the state. The college is one nine members of the multi-state consortium led by Lewis & Clark Community College – the Mississippi River Transportation, Distribution, and Logistics Consortium. Hinds Community College focused its TAACCCT funds on short-term certificate training programs for deckhands, tankermen, and pilots working on ships serving inland waters (e.g., barges serving the Mississippi River) and commercial driver's license training for truck drivers, the latter through an innovative partnership with an employer (KLLM).

Lewis & Clark Community College, a two-year higher education institution with campuses located in Godfrey, Edwardsville, and Alton, Illinois, offers associate degrees and certificates in more than 40 career programs. The college, which serves approximately 15,000 students annually, was the grant administrator and lead college for the *Mississippi River Transportation, Distribution, and Logistics consortium*, a multistate consortium focused on waterway and intermodal transportation, distribution, and logistics. The consortium, which consisted of nine community colleges spread across eight states along the Mississippi River, used TAACCCT Round 3 funding to support new and enhanced degree and certificate programs, purchases of new equipment, development of internships and other work-based learning opportunities, and enhancements to curriculum. Across the consortium, over 30 training programs were the focus of grant activities, including degree and certificate programs in welding, automotive technology, logistic and warehouse operations, process operations, and truck driving.

Northcentral Technical College District is the two-year technical college located in Wausau, Wisconsin that served as the lead college and grant administrator for the INTERFACE project. The INTERFACE project was a single-state consortium of 16 technical colleges across Wisconsin targeting the IT industry. The goal of the consortium's $23.2 million dollar TAACCCT grant focused on retraining unemployed/underemployed adult learners in IT skills to start or restart individuals' career pathways and meet local employer needs.

Madison College is a technical college located in Madison, Wisconsin. It served as a member college of the INTERFACE project, which focused on training participants for IT jobs. Madison College served

participants straight from high school, displaced workers, and participants returning to get a new or different degree. With the TAACCCT grant, they provided short-term training to underemployed/unemployed individuals for the IT industry, which is rapidly growing in the Madison area.

Midlands Technical College is a two-year public college serving the Richland, Lexington, and Fairfield counties in South Carolina. The college served as the lead of the $25 million multistate BOOST project, which included three South Carolina colleges, one college in Alabama, and two colleges in North Carolina. BOOST offered short-term, stackable certificates in nursing assistance, cardiac care, and phlebotomy; infused programs with simulation technology to accelerate learning; and provided participants with the financial and academic support they needed to complete the programs and start a new career. Project goals aligned with the demand for health care workers in the local and state economy.

Pikes Peak Community College was a member college participating in the *CHAMP* program, a single-state consortium of seven community colleges, one technical college, and one four-year university. Pikes Peak Community College's CHAMP grant staff worked closely with several advanced manufacturing employers in their region, and they worked closely with veterans and veterans' services organizations due to the presence of several military installments in Colorado Springs. Pikes Peak Community College's project focused on machining, computer-aided design (CAD), and electronics courses with a strong emphasis on soft skills.

Wallace Community College Selma is two-year community college serving a six-county region in the Black Belt region of Alabama. As a member of the BOOST consortium, the college's goals were to offer short-term, stackable certificates in patient care, cardiac certified nursing assistance, and phlebotomy to TAA workers; veterans; traditional and nontraditional students; and unemployed, dislocated, and incumbent workers, focusing on student-centered and experiential learning. The college sought to increase capacity to provide instruction through high-technology simulation in patient care and provide a pipeline for trained health care workers to the regional workforce.

Source: TAACCCT Round 3 site visit interviews and grantee documents.

Appendix E. Survey Findings

Under the TAACCCT Grant, Is Your College Part of a TAACCCT Consortium?

Response Category	Round 3		Rounds 1 and 2	
	# of Colleges	Percent	# of Colleges	Percent
Yes	149	80%	518	88%
No	38	20%	72	12%
N	187	100%	590	100%
Missing	0		0	

Source: Urban Institute survey of TAACCCT colleges, Rounds 1–3.

Under the TAACCCT Grant, Is Your College the Lead of the Consortium?

Response Category	Round 3		Rounds 1 and 2	
	# of Colleges	Percent	# of Colleges	Percent
Yes	21	14%	67	11%
No	128	86%	451	76%
N	149	100%	594	87%
Missing	0		76	

Source: Urban Institute survey of TAACCCT colleges, Rounds 1–3.

Under Your TAACCCT Grant, What Type of Geographical Area Is Served by Your College?

Response Category	Round 3		Rounds 1 and 2	
	# of Colleges	Percent	# of Colleges	Percent
Single county	36	19%	123	21%
Multiple counties but not all counties within a state	94	51%	325	55%
All counties within a state	34	18%	105	18%
Multiple states	21	11%	30	5%
N=	185		583	
Missing	2		7	

Source: Urban Institute survey of TAACCCT colleges, Rounds 1–3.
Note: Columns will not add to 100 percent because user could select more than one option.

TABLE E.4

How Would You Characterize the Geographic Areas Served by Your Grant?

Response Category	Round 3		Rounds 1 and 2	
	# of Colleges	Percent	# of Colleges	Percent
Urban	92	50%	238	41%
Suburban	71	39%	228	39%
Rural	121	66%	406	70%
N=	184		580	
Missing	3		10	

Source: Urban Institute survey of TAACCCT colleges, Rounds 1–3.

Note: Columns will not add to 100 percent because user could select more than one option.

TABLE E.5

To What Extent Has the Geographic Area Served by Your TAACCCT Project Been Affected by Major Employer/Plant Closings/Layoffs in the Five Years Prior to the Grants?

Response Category	Round 3		Rounds 1 and 2	
	# of Colleges	Percent	# of Colleges	Percent
Substantially affected	57	31%	160	28%
Somewhat affected	69	37%	252	43%
Hardly affected	34	18%	104	18%
Don't know/unsure	25	14%	65	11%
N=	185	100%	581	100%
Missing	2		9	

Source: Urban Institute survey of TAACCCT colleges, Rounds 1–3.

TABLE E.6

To What Extent Has the Geographic Area Served by Your TAACCCT Project Been Affected by Major Employer/Plant Closings/Layoffs in the Years Since the Start of Your Grant?

Response Category	Round 3		Rounds 1 and 2	
	# of Colleges	Percent	# of Colleges	Percent
Substantially affected	22	12%	56	10%
Somewhat affected	64	34%	243	42%
Hardly affected	75	40%	224	39%
Don't know/unsure	25	13%	56	10%
N=	186	100%	579	100%
Missing	1		11	

Source: Urban Institute survey of TAACCCT colleges, Rounds 1–3.

Significant Factors Over the Past Three Years that Influenced the Design or Implementation of the TAACCCT Project?

Response Category	Round 3		Rounds 1 and 2	
	# of Colleges	Percent	# of Colleges	Percent
Economic recovery/expansion in the region/locality	140	76%	287	50%
Organizational/management changes or restructuring	56	30%	158	28%
Receipt of new funding/grants by your institution	55	30%	187	33%
Increase/decrease in TAA-certified plant closings	48	26%	132	23%
Population/demographic changes in the region/locality	33	1%	136	24%
Loss of funding/grants by your institution	18	10%	78	14%
Employer demand / workforce alignment changes	18	10%	54	9%
Other (please specify):	16	9%	41	7%
N=	184		573	
Missing	3		17	

Source: Urban Institute survey of TAACCCT colleges, Rounds 1–3.

Note: Columns will not add to 100 percent because user could select more than one option.

TABLE E.8

Industry Sectors Ranked by TAACCCT College as 1st, 2nd, or 3rd (in Terms of Employment) in the Areas Served by the TAACCCT Grants

Response Category	Round 3		Rounds 1 and 2	
	# of Colleges (Ranking Sector within Top 3)	Percent	# of Colleges (Ranking Sector within Top 3)	Percent
Health care and social assistance	127	71%	392	66%
Manufacturing	85	47%	312	53%
Educational services	37	21%	148	25%
Transportation and warehousing	36	20%	91	15%
Retail trade	33	18%	98	17%
Accommodation and food services	27	15%	101	17%
Professional and technical services	26	15%	98	17%
Agriculture, fishing, and hunting	23	13%	89	15%
Public administration	22	12%	56	9%
Mining, oil, and gas extraction	18	10%	34	6%
Information	16	9%	42	7%
Finance and insurance	13	7%	25	4%
Construction	11	6%	43	7%
Administrative and support and waste management and remediation services	6	3%	10	2%
Utilities	6	3%	20	3%
Management of companies and enterprises	5	3%	18	3%
Other services (except public administration)	4	2%	30	5%
Wholesale trade	3	2%	5	1%
Arts and recreation	2	1%	4	1%
Real estate and rental and leasing	2	1%	3	1%
N=	179		590	
Missing	8		0	

Source: Urban Institute survey of TAACCCT colleges, Rounds 1–3.

Note: Columns will not add to 100 percent because users could select more than one option.

What Is/Are the Focus Industry/Industries for Your Local Project?

Response Category	Round 3		Rounds 1 and 2	
	# of Colleges	Percent	# of Colleges	Percent
Manufacturing	90	48%	327	55%
Information	50	27%	64	11%
Health Care and Social Assistance	49	26%	216	37%
Transportation and Warehousing	39	21%	48	8%
Professional, Scientific, and Technical Services	28	15%	93	16%
Construction	15	8%	54	9%
Mining, Oil, and Gas Extraction	15	8%	33	6%
Utilities	11	6%	42	7%
Agriculture, Fishing, and Hunting	9	5%	32	5%
Other Services (except Public Administration)	9	5%	15	3%
Accommodation and Food Services	8	4%	19	3%
Educational Services	6	3%	43	7%
Wholesale Trade	5	3%	0	0%
Management of Companies and Enterprises	4	2%	18	3%
Administrative and Support and Waste Management and Remediation Services	3	2%	15	3%
Finance and Insurance	3	2%	11	2%
Retail Trade	2	1%	10	2%
Public Administration	2	1%	12	2%
Arts, Entertainment, and Recreation	1	1%	2	0%
Real Estate and Rental and Leasing	1	1%	0	0%
Biosciences and Biotechnology	0	0%	0	0%
Other	9	5%	25	4%
N=	186		590	
Missing	1		0	

Source: Urban Institute survey of TAACCCT colleges, Rounds 1–3.

Note: Columns will not add to 100 percent because users could select more than one option.

What Specific Education and Training Approaches or Strategies Have Been Implemented under Your TAACCCT Project?

Response Category	Round 3		Rounds 1 and 2	
	# of Colleges	Percent	# of Colleges	Percent
Accelerated Learning				
Creation of stackable or latticed credentials	152	84%	388	66%
Hybrid learning strategies	130	71%	362	62%
Development of industry-recognized credentials	118	65%	286	49%
On-line teaching/learning	113	62%	286	49%
Design of new career pathway program	105	58%	274	47%
Prior learning assessments	106	58%	241	41%
Modular courses	79	43%	243	42%
Credits for work experience	62	34%	151	26%
Self-paced learning	43	24%	146	25%
Asynchronistic scheduling	35	19%	123	21%
Real-time on-line instruction	26	14%	71	12%
College Persistence and Completion				
Articulation from programs to more advanced programs	98	54%	240	41%
Competency-based learning	87	48%	225	39%
Contextualized learning	64	35%	266	46%
Improvements to basic skills/adult basic education	63	35%	227	39%
Team teaching	47	26%	175	30%
Restructuring of developmental education	32	18%	118	20%
Improvements to English as a second language instruction	6	3%	51	9%
Connections to Employment				
Internships	108	59%	274	47%
Simulations	107	59%	279	48%
Occupational preparatory classes (e.g., pre-apprenticeship, occupational boot camps)	45	25%	107	18%
Job shadowing	43	24%	111	19%
On-the-job training other than registered apprenticeship	36	20%	93	16%
Cooperative education or work-study program	32	18%	81	14%
Clinical placements	29	16%	119	20%
DOL-approved registered apprenticeships	19	10%	37	6%
N=	182		584	
Missing	5		6	

Source: Urban Institute survey of TAACCCT colleges, Rounds 1–3.

Note: Columns will not add to 100 percent because users could select more than one option.

Which Credentials Has Your College Developed (or Helped Develop) for Your TAACCCT Program(s)?

Response Category	Round 3				Rounds 1 and 2			
	Newly Developed	Percent	Adapted/ Enhanced	Percent	Newly Developed	Percent	Adapted/ Enhanced	Percent
Certificates of completion for programs of less than one year duration	116	64%	61	34%	279	50%	250	45%
Certificates of completion for programs of one to two years' duration	64	35%	83	46%	147	26%	247	45%
Academic degrees	59	33%	76	42%	104	19%	213	38%
Occupational degrees	27	15%	42	23%	56	10%	131	24%
Licenses	13	7%	15	8%	32	6%	58	10%
Professional / industry certifications	100	55%	60	33%	193	35%	168	30%
Other credentials	12	7%	8	4%	13	2%	14	3%
N=	181				555			
Missing	6				35			

Source: Urban Institute survey of TAACCCT colleges, Rounds 1–3.

Note: Columns will not add to 100 percent because users could select more than one option.

TABLE E.12

With TAACCCT Funding, Has Your College Implemented Any New Types of Articulation or Transfer Policies or Agreements?

Response Category	Round 3		Rounds 1 and 2	
	# of Colleges	Percent	# of Colleges	Percent
Articulation between continued education and degree programs	74	42%	206	39%
New prior learning assessments that allow for credits to be counted towards program of study	74	42%	202	3%
New transfer policies/agreements with four-year institutions	71	40%	165	31%
No new types of articulation or transfer policies or agreements	49	28%	184	35%
Other transfer/articulation agreements	22	12%	43	8%
N=	178		529	
Missing	9		61	

Source: Urban Institute survey of TAACCCT colleges, Rounds 1–3.

Note: Column will not add to 100 percent because users could select more than one option.

TABLE E.13

In Addition to Education and Training Activities, What *Existing* Support Services Has Your College Leveraged for TAACCCT Participants, Either within Your Institution or from Partners?

Response Category	Round 3				Rounds 1 and 2			
	# of Colleges - Provided at Your Institution	Percent	# of Colleges - Provided by a Partner	Percent	# of Colleges - Provided at Your Institution	Percent	# of Colleges - Provided by a Partner	Percent
Child care assistance	38	21%	33	18%	112	20%	111	20%
Coordination with public assistance	44	24%	65	36%	136	24%	205	37%
Emergency assistance (e.g., rental or utility assistance)	43	24%	51	28%	109	19%	152	27%
Pell grants	144	80%	3	2%	424	76%	14	3%
Other financial aid	141	78%	29	16%	408	73%	88	16%
Financial counseling	103	57%	28	15%	306	55%	74	13%
Case management or proactive advising	131	72%	30	17%	413	74%	88	16%
Peer support groups	54	30%	10	6%	171	31%	24	4%
Personal/family counseling	53	29%	31	17%	129	23%	107	19%
Transportation assistance	49	27%	55	30%	121	22%	166	30%
None	6	3%	6	3%	26	5%	20	4%
Other	3	2%	6	3%	13	2%	7	1%
N=	181				560			
Missing=	6				30			

Source: Urban Institute survey of TAACCCT colleges, Rounds 1–3.

Note: Columns will not add to 100 percent because users could select more than one option.

What _Existing_ Career or Employment Services Does Your College or Its Partners Make Available for TAACCCT Participants?

Response Category	Round 3				Rounds 1 and 2			
	# of Colleges - at Your Institution	Percent	# of Colleges - from a Partner	Percent	# of Colleges - at Your Institution	Percent	# of Colleges - from a Partner	Percent
Interviewing skills/résumé workshops	170	92%	69	38%	537	94%	194	34%
Referrals to job openings	168	91%	71	39%	509	89%	216	38%
Job search assistance	164	89%	68	37%	493	86%	213	37%
Employment/career counseling	162	88%	69	38%	513	90%	207	36%
Job readiness/soft skills training	161	88%	59	32%	502	88%	165	29%
None	3	2%	2	1%	4	1%	1	0%
Other	0	0%	1	1%	6	1%	2	0%
N=	184			N=	570			
Missing	3			Missing	20			

Source: Urban Institute survey of TAACCCT colleges, Rounds 1–3.

Note: Columns will not add to 100 percent because users could select more than one option.

Which of the Following Groups of Individuals Do Your College's TAACCCT Programs Actively Recruit or Target? Has Your College Previously Targeted Any of These Groups for Similar Programs of Study?

Response Category	Round 3				Rounds 1 and 2			
	# of Colleges - Yes, Actively Recruits	Percent	# of Colleges - Targeted Group Previously	Percent	# of Colleges - Yes, Actively Recruits	Percent	# of Colleges - Targeted Group Previously	Percent
Ex-offenders/court-involved	38	21%	20	11%	100	18%	86	15%
Immigrants/refugees/first-generation Americans	58	32%	29	16%	197	35%	140	25%
Incumbent workers	152	83%	79	43%	421	74%	273	48%
Low-skill or education	139	76%	76	42%	448	79%	291	51%
Limited English proficiency	41	22%	29	16%	182	32%	152	27%
Long-term unemployed	142	78%	69	38%	409	72%	241	42%
Low-income/disadvantaged	150	82%	78	43%	454	80%	292	51%
Minorities – racial/ethnic	130	71%	74	40%	378	67%	261	46%
New entry-level workers	142	78%	67	37%	418	74%	255	45%
Older workers	108	59%	54	30%	300	53%	175	31%
People with disabilities	71	39%	46	25%	175	31%	129	23%
Underemployed	161	88%	80	44%	465	82%	268	47%
Unemployed/dislocated workers	166	91%	83	45%	495	87%	282	50%
Unemployment insurance claimants	70	38%	32	17%	208	37%	128	23%
Veterans	167	91%	96	52%	492	87%	297	52%
Workers eligible for Trade Adjustment Assistance	156	85%	56	31%	468	82%	184	32%
Women	135	74%	77	42%	418	74%	269	47%
Men	121	66%	72	39%	378	67%	254	45%
Other (please specify)	6	3%	3	2%	22	4%	17	3%
N=	183		183		584		584	
Missing	4		4		6		6	

Source: Urban Institute survey of TAACCCT colleges, Rounds 1–3.

Note: Columns will not add to 100 percent because users could select more than one option.

TABLE E.16

What Are the Enrollment Requirements for Non-TAA Participants for Your TAACCCT Project?

Response Category	Round 3 # of Colleges	Round 3 Percent	Rounds 1 and 2 # of Colleges	Rounds 1 and 2 Percent
High school diploma or GED	147	81%	439	78%
College entrance exam (such as SAT, ACT, COMPASS)	94	52%	294	52%
Basic skills (such as TABE, CASAS, BEST)	60	33%	203	36%
Interview	30	17%	165	29%
Background check	23	13%	77	14%
Drug test	22	12%	58	10%
Aptitude test	21	12%	101	18%
Other (please specify)	30	17%	80	14%
N=	181		555	
Missing	6		35	

Source: Urban Institute survey of TAACCCT colleges, Rounds 1–3.

Note: Columns will not add to 100 percent because users could select more than one option. SAT = Scholastic Aptitude Test; ACT = American College Test; and COMPASS is an online test used to evaluate individuals' skills and place them in the appropriate level of courses. TABE = Test of Adult Basic Education; CASAS = comprehensive adult student assessment systems; and BEST = Basic Integrated Skills Test.

TABLE E.17

Which of the Following Recruitment Strategies Does Your TAACCCT Project Use?

Response Category	Round 3 # of Colleges	Round 3 Percent	Rounds 1 and 2 # of Colleges	Rounds 1 and 2 Percent
Distribution of flyers, posters or other self-produced educational/informational materials	172	93%	526	91%
Referrals from the workforce system	169	92%	503	87%
Partnerships with employers and industry associations	168	91%	497	86%
In-person presentations in the community (e.g., at schools, neighborhood centers, libraries)	163	89%	488	85%
Informational websites	150	82%	438	76%
Media outreach campaigns (e.g., TV, radio, newspapers, professionally prepared ads on buses/bus shelters)	132	72%	348	60%
Referrals from community- or faith-based organizations	103	56%	293	51%
Direct mail campaigns	73	40%	211	37%
Door-to-door outreach	15	8%	39	7%
Toll-free information hotlines	3	2%	29	5%
Other (please specify)	15	8%	26	5%
N=	184		577	
Missing	3		13	

Source: Urban Institute survey of TAACCCT colleges, Rounds 1–3.

Note: Column will not add to 100 percent because users could select more than one option.

For Each of the Following Recruitment Strategies, How Effective Did You Find Each Strategy for Recruiting into Your TAACCCT Programs?

Response Category	Round 3			Rounds 1 and 2		
	# of Colleges Using Strategy	# of Colleges Rating Strategy as Effective	Percent	# of Colleges Using Strategy	# of Colleges Rating Strategy as Effective	Percent
Partnerships with employers and industry associations	164	119	73%	479	334	70%
Toll-free information hotlines	3	2	67%	26	9	35%
In-person presentations in the community (e.g., at schools, neighborhood centers, libraries)	158	105	66%	471	295	63%
Door-to-door outreach	15	9	60%	37	17	46%
Referrals from the workforce system	163	79	48%	485	255	53%
Referrals from community- or faith-based organizations	99	44	44%	277	113	41%
Distribution of flyers, posters, or other self-produced educational/informational materials	168	66	39%	506	174	34%
Informational websites	147	55	37%	417	154	37%
Media outreach campaigns (e.g., TV, radio, newspapers, professionally prepared ads on buses/bus shelters)	128	46	36%	328	137	42%
Direct mail campaigns	72	11	15%	204	25	12%

Source: Urban Institute survey of TAACCCT colleges, Rounds 1–3.

Note: Column will not add to 100 percent because each row has its own N.

On a Scale of "A Great Challenge/Problem" to "Not a Challenge/Problem at All," Do Any of the Following Potential Problems Affect Your Recruitment or Enrollment of TAACCCT Participants?

Response Category	Round 3			Rounds 1 and 2		
	# of Colleges Responding to the Question	# of Colleges Rating Factor as Great/Some -what of a Challenge	Percent	# of Colleges Responding to the Question	# of Colleges Rating Factor as Great/Some- what of a Challenge	Percent
Conflict between work and school hours	183	109	60%	585	350	60%
Difficulties with identifying and finding eligible participants	182	90	49%	582	300	52%
Low or inadequate basic skill levels of applicants	183	79	43%	580	272	47%
Child care	183	74	40%	582	265	46%
Insufficient referrals from partner community-based organizations	184	74	40%	582	192	33%
Insufficient referrals from partner(s) in the workforce system	183	73	40%	581	206	35%
Participants' lack of access to reliable transportation	183	70	38%	581	231	40%
Changing economic and labor market conditions that don't align with programs of study offered	179	67	37%	580	237	41%
Tuition cost	183	61	33%	581	222	38%
Negative perceptions of or a lack of interest in occupations by potential participants	183	57	31%	580	195	34%
Insufficient referrals from partner employers or employer organizations	184	56	30%	581	185	32%
Insufficient resources devoted to outreach and recruitment	184	51	28%	584	170	29%
Lack of effectiveness of selected outreach strategies	183	35	19%	580	130	22%
Other (please specify)	36	18	50%	72	29	40%

Source: Urban Institute survey of TAACCCT colleges, Rounds 1–3.

Notes: Columns will not add to 100 percent because each row has its own N. Respondents could check more than one challenge.

With Which Departments or Offices in Your Institution Have You Developed New or Expanded Existing Partnerships for the TAACCCT Grant?

Response Category	Round 3			Rounds 1 and 2		
	# of Colleges Responding to the Question	# of Colleges that Expanded or Developed Partnerships	Percent	# of Colleges Responding to the Question	# of Colleges that Expanded or Developed Partnerships	Percent
Student support services	183	140	77%	543	383	71%
Other workforce/career and technical education departments	180	132	73%	535	384	72%
Career services	180	131	73%	550	394	72%
College administration	178	110	62%	534	302	57%
Tutoring/academic support centers	179	109	61%	540	324	60%
Other academic departments	174	103	59%	518	287	55%
Adult education/remedial education services	176	91	52%	535	327	61%
Information technology/computer services	178	89	50%	526	233	44%
Financial aid	179	75	42%	531	214	40%
Other (specify)	17	10	59%	49	20	41%

Source: Urban Institute survey of TAACCCT colleges, Rounds 1–3.

Notes: Columns will not add to 100 percent because each row has its own N. Respondents could check more than one challenge.

What Resources and/or Services Did Departments or Offices in Your College Provide to TAACCCT Participants?

Response Category	Round 3		Rounds 1 and 2	
	# of Colleges	Percent	# of Colleges	Percent
Student recruitment/outreach	163	88%	453	77%
Access/referral to support services	158	85%	468	79%
Job search assistance	158	85%	460	78%
Academic support and tutoring	157	85%	489	83%
Career navigation and information	151	82%	453	77%
Counseling on program selection/enrollment	148	80%	425	72%
Program development (e.g., career pathways, course sequencing, modularization of courses, incorporation of technology-enabled tools, internships)	145	78%	413	70%
Financial counseling and aid	142	77%	442	75%
Curriculum development (course specify instructional design and content)	138	75%	379	64%
Enrollment processes	138	75%	407	69%
Purchase and operation of technology-enabled learning tools	114	62%	283	48%
Testing for college readiness	109	59%	359	61%
Leadership/oversight	104	56%	295	50%
Development of articulation agreements	100	54%	236	40%
Development of prior learning assessments	95	51%	224	38%
Remediation	85	46%	322	55%
Assistance with tuition waivers	67	36%	185	31%
Other (please specify):	3	2%	19	3%
N=	185		590	
Missing	2		0	

Source: Urban Institute survey of TAACCCT colleges, Rounds 1–3.

Note: Columns will not add to 100 percent because users could select more than one option.

TABLE E.22

With What Types of External Organizations Have You Developed New or Enhanced Current Partnerships with During Your TAACCCT Grant?

Response Category	Round 3			Rounds 1 and 2		
	# of Colleges Responding to the Question	# of Colleges that Expanded or Developed Partnerships	Percent	# of Colleges Responding to the Question	# of Colleges that Expanded or Developed Partnerships	Percent
Industry associations, employers, or chambers of commerce	184	159	86%	546	430	79%
Local workforce investment boards (LWIB)/American Job Centers	182	139	76%	546	356	65%
Community-based organizations or other social services agencies	180	119	66%	536	306	57%
Career or job centers (other than American Job Centers)	180	114	63%	537	323	60%
Universities or other four-year institutions	178	109	61%	527	229	43%
School districts (K-12)	183	112	61%	527	275	52%
Economic development organizations	179	104	58%	532	272	51%
State workforce investment boards	176	88	50%	527	237	45%
State government agencies	180	87	48%	528	187	35%
Community or technical colleges other than those in your consortium (if applicable)	177	79	45%	527	238	45%
Local government	179	72	40%	527	187	35%
Vocational or trade schools	175	59	34%	519	136	26%
Philanthropic community	177	51	29%	523	143	27%
Faith-based organizations	175	44	25%	522	88	17%
Unions	173	18	10%	522	63	12%
Seed and venture capital organizations or individuals, investor networks, or entrepreneurs	175	15	9%	512	44	9%
Other (please specify):	17	10	59%	41	7	17%

Source: Urban Institute survey of TAACCCT colleges, Rounds 1–3.

Note: Columns will not add to 100 percent because each row has its own N

What Resources and/or Services Does (Did) the Public Workforce System (e.g., through American Job Centers) Provide to Your TAACCCT Project?

Response Category	Round 3		Rounds 1 and 2	
	# of Colleges	Percent	# of Colleges	Percent
Access to financial support for participants (e.g., Individual Training Accounts)	97	54%	279	52%
Career or skill assessments	83	47%	263	49%
Advisory committee/steering committee participation	85	48%	219	40%
Connections to employers or industry associations	97	54%	279	52%
Curriculum development	11	6%	34	6%
Direct funding/training contracts	31	17%	100	18%
Internships or other work experience activities	22	12%	67	12%
Job placement services	100	56%	277	51%
Job readiness/soft skills training	76	43%	199	37%
Mentoring	32	18%	76	14%
Operation of training activities	18	10%	39	7%
Referral to or assistance developing registered apprenticeships	19	11%	42	8%
Referrals to your institution's TAACCCT programs	129	72%	393	73%
TAA program services (e.g., case management)	76	43%	197	36%
Use of facilities (e.g., space for training activities, meetings with employers, job fairs)	49	28%	131	24%
Use of staff as counselors/navigators	40	22%	129	24%
None	12	7%	45	8%
Other (please specify):	4	2%	27	5%
N=	178		541	
Missing	9		49	

Source: Urban Institute survey of TAACCCT colleges, Rounds 1–3.

Note: Columns will not add to 100 percent because users could select more than one option.

For Which Occupations (or Job Titles) in the TAACCCT Grant Is Your College Developing TAACCCT Programs?

Response Category	Round 3		Rounds 1 and 2	
	# of Colleges	Percent	# of Colleges	Percent
Accountants and auditors	5	3%	15	3%
Aerospace engineering and operations technicians	13	7%	22	4%
Agricultural and food science technicians	8	4%	31	5%
Aides, home health	21	11%	65	11%
Aircraft mechanics and service technicians	7	4%	20	3%
Aircraft structure, surfaces, rigging, and systems assemblers	5	3%	19	3%
Ambulance drivers and attendants, except emergency medical technicians	3	2%	6	1%
Automotive service technicians and mechanics	6	3%	34	6%
Cardiovascular technologists and technicians	7	4%	10	2%
Carpenters	4	2%	16	3%
Combined food preparation and serving workers, including fast food	5	3%	13	2%
Community health workers	16	9%	45	8%
Computer and information systems managers	45	25%	64	11%
Computer programmers	28	15%	46	8%
Computer systems analysts	40	22%	48	8%
Computer-controlled machine tool operators, metal and plastic	39	21%	108	18%
Construction laborers	11	6%	30	5%
Customer service representatives	14	8%	25	4%
Dental assistants	4	2%	14	2%
Diagnostic medical sonographers	3	2%	7	1%
Drafters, includes computer-aided designers	24	13%	56	9%
Electricians	25	14%	71	12%
Electromechanical equipment assemblers	34	19%	83	14%
Emergency medical technicians and paramedics	15	8%	40	7%
Energy auditors	4	2%	19	3%
Energy engineers	5	3%	18	3%
Executive secretaries and executive administrative assistants	5	3%	22	4%
Heating, air conditioning, and refrigeration mechanics and installers	13	7%	44	7%
Industrial engineers	21	11%	50	8%
Industrial machinery mechanics	56	31%	164	28%
Information security analysts	35	19%	34	6%

Response Category	Round 3		Rounds 1 and 2	
	# of Colleges	Percent	# of Colleges	Percent
Licensed practical and licensed vocational nurses	6	3%	38	6%
Machinists	53	29%	157	27%
Market research analysts and marketing specialists	1	1%	7	1%
Massage therapists	1	1%	8	1%
Materials scientists	1	1%	5	1%
Medical assistants	11	6%	85	14%
Medical records and health information technicians	19	10%	83	14%
Meter readers, utilities	5	3%	10	2%
Miscellaneous assemblers and fabricators	43	23%	98	17%
Network administrators	46	25%	40	7%
Nursing assistants	20	11%	78	13%
Occupational therapy assistants	3	2%	16	3%
Pharmacy technicians	7	4%	33	6%
Phlebotomists	9	5%	39	7%
Physical therapist assistants	2	1%	19	3%
Radiologic technologists	5	3%	26	4%
Registered nurses	10	5%	67	11%
Respiratory therapists	3	2%	13	2%
Software developers, applications	18	10%	30	5%
Surgical technologists	5	3%	13	2%
Web developers	26	14%	31	5%
Welders, cutters, solderers, and brazers	59	32%	171	29%
Workers, hazardous materials removal	4	2%	13	2%
Other, not listed	71	39%	239	41%
N=	183		590	
Missing	4		0	

Source: Urban Institute survey of TAACCCT colleges, Rounds 1–3.

Note: Column will not add to 100 percent because users could select more than one option.

How Have Employment Opportunities for These Occupations Changed in Your Region Since the Start of Your Grant?

Response Category	Round 3		Rounds 1 and 2	
	# of Colleges	Percent	# of Colleges	Percent
Increased a lot	39	21%	104	18%
Increased somewhat	76	41%	239	42%
About the same	49	27%	158	27%
Decreased somewhat	10	5%	31	5%
Decreased a lot	2	1%	12	2%
Don't know/unsure	8	4%	31	5%
N=	184	100%	590	100%
Missing	3		0	

Source: Urban Institute survey of TAACCCT colleges, Rounds 1–3.

TABLE E.26

On a Scale of One to Five, with One Being Definitely Not and Five Being Definitely Will, Which Services Developed Specifically for the TAACCCT Grant Are Likely to Continue after the End of the Grant?

Response Category	Round 3			Rounds 1 and 2		
	# of Colleges Responding to the Question	# of Colleges that Definitely or Likely Will Continue Service After TAACCCT	Percent	# of Colleges Responding to the Question	# of Colleges that Definitely or Likely Will Continue Service After TAACCCT	Percent
Other workforce/career and technical education departments	33	32	97%	322	283	88%
Information technology/computer services	88	80	91%	387	345	89%
Financial aid	74	65	88%	206	183	89%
Career services	130	114	88%	228	204	89%
Adult education/remedial education services	90	78	87%	375	337	90%
Tutoring/academic support centers	106	91	86%	317	285	90%
Other academic departments	98	83	85%	270	223	83%
Student support services	137	116	85%	86	76	88%
College administration	107	86	80%	26	22	85%
Other	11	10	91%	296	253	85%

Source: Urban Institute survey of TAACCCT colleges, Rounds 1–3.

Note: Columns will not add to 100 percent because each row has its own N.

To Date, How Successful Has Your College Been in Working with Partners?

Response Category	Round 3			Rounds 1 and 2		
	# of Colleges Responding to the Question	# of Colleges that Were Very or Somewhat Successful in Working with Partners	Percent	# of Colleges Responding to the Question	# of Colleges that Were Very or Somewhat Successful in Working with Partners	Percent
Communicating with partners	184	149	81%	557	494	89%
Working with partners while making program changes	185	145	78%	555	474	85%
Engaging partners throughout the grant period	184	136	74%	556	488	88%
Accessing planned leveraged resources	181	87	48%	554	352	64%
Other	14	6	43%	37	9	24%

Source: Urban Institute survey of TAACCCT colleges, Rounds 1–3.

Note: Columns will not add to 100 percent because each row has its own N.

In Your Opinion, How Successful Has Your Program Been in Supporting and Strengthening Partnerships with the Following Organizations?

Response Category	Round 3			Rounds 1 and 2		
	# of Colleges Responding to the Question	# of Colleges that Were Very or Somewhat Successful in Supporting/ Strengthening Partnerships	Percent	# of Colleges Responding to the Question	# of Colleges that Were Very or Somewhat Successful in Supporting/ Strengthening Partnerships	Percent
Employers or industry associations	185	160	86%	556	485	87%
Public workforce system	184	100	54%	552	361	65%
Secondary schools (high schools)	183	98	54%	555	432	78%
Institutions of higher education (four-year colleges and universities, community and technical colleges)	184	93	51%	556	398	72%
Other training providers (community-based organizations, trade schools, etc.)	182	73	40%	553	301	54%
Other	10	2	20%	29	6	21%

Source: Urban Institute survey of TAACCCT colleges, Rounds 1–3.

Note: Columns will not add to 100 percent because each row has its own N.

Colleges' Plans to Sustain Instructional and Training Strategies

Response Category	Round 3		Rounds 1 and 2	
	# of Colleges Responding to the Question	% of Colleges that Plan to Sustain Strategy	# of Colleges Responding to the Question	% of Colleges that Plan to Sustain Strategy
Accelerated learning				
Credits for prior learning or work experience	62	92%	149	89%
Stackable or latticed credentials	152	93%	379	94%
Hybrid (online plus traditional) learning strategies	130	91%	355	92%
Development of industry-recognized credentials	116	90%	279	94%
Online teaching/learning	111	94%	280	92%
Assessment technology	43	86%	122	83%
Real-time online instruction	26	73%	67	81%
Modular or chunked course	73	85%	238	83%
Self-paced learning	43	70%	141	79%
Design of new career pathway program	105	84%	269	86%
Asynchronistic scheduling	34	79%	119	80%
Prior learning assessments	106	24%	234	43%
College Persistence and Completion				
Articulation from programs to more advanced programs	97	93%	233	94%
Contextualized learning	63	83%	261	88%
Competency-based learning	87	83%	216	89%
Improvement of financial aid processes	22	77%	64	77%
Student remediation	16	75%	191	87%
Development of knowledge, skills, abilities, and other characteristics (KSAO)	65	80%	162	86%
Improvements to basic skills/adult basic education	62	85%	220	86%
Peer support groups or peer mentors	42	62%	111	73%
Enhanced academic support (such as personalized instruction, tutoring)	103	74%	313	81%
Restructuring of developmental education	32	78%	113	77%
Team teaching	47	62%	171	71%
Improvements to English as a Second Language instruction	6	67%	51	61%
Connections to Employment				
DOL-approved registered apprenticeships	19	79%	36	78%
Clinical placements	29	93%	115	97%

Response Category	Round 3		Rounds 1 and 2	
	# of Colleges Responding to the Question	% of Colleges that Plan to Sustain Strategy	# of Colleges Responding to the Question	% of Colleges that Plan to Sustain Strategy
Simulations	106	93%	273	91%
Internships	107	91%	265	92%
Industry mentors	52	71%	135	75%
On-the-job training (other than registered apprenticeship)	34	79%	88	74%
Job shadowing	43	72%	106	76%
Career coaching or counseling	144	72%	400	81%
Cooperative education or work-study program	32	91%	80	88%

Source: Urban Institute survey of TAACCCT colleges, Rounds 1-3.%

Notes: Percentages are out of total respondents who reported implementing each strategy. Round 3 N=183 (4 missing colleges); Rounds 1 & 2 N=590 (0 missing colleges). Column will not add to 100 percent because users could select more than one option.

Likelihood That Internal Partnerships Will Continue after the Grant Ends

Response Category	Round 3		Rounds 1 and 2	
	# of Colleges Responding to the Question	% of Colleges that Definitely or Likely Will Continue Service After TAACCCT	# of Colleges Responding to the Question	% of Colleges that Definitely or Likely Will Continue Service After TAACCCT
Student support services	137	85%	317	90%
Financial aid	74	88%	228	89%
Adult education/remedial education services	90	87%	322	88%
Information technology/computer services	88	91%	375	90%
Career services	130	88%	387	89%
Other academic departments	98	85%	86	88%
Tutoring/academic support centers	106	86%	270	83%
Other workforce/career and technical education departments	33	97%	26	85%
College administration	107	80%	206	89%

Source: Urban Institute survey of TAACCCT colleges, Rounds 1-3.

Note: Columns will not add to 100 percent because each row has its own N.

Likelihood That External Partnerships Will Continue

Response Category	Round 3		Rounds 1&2	
	# of Colleges Responding to the Question	% of Colleges Indicating Partnership Definitely Will or Likely Will Continue	# of Colleges Responding to the Question	% of Colleges Indicating Partnership Definitely Will or Likely Will Continue
Industry associations/employers/chambers of commerce	97	92%	522	92%
School districts	78	78%	447	86%
Universities/four-year colleges	35	40%	288	41%
Local workforce development boards / American Job Centers	57	79%	505	87%
State government agencies	87	76%	413	80%
Career/jobs centers (not American Job Centers)	72	75%	457	79%
Community-based organizations/social services agencies	98	78%	483	80%
Economic development organizations	83	88%	463	84%
Local government	104	69%	437	79%
State workforce development boards	55	69%	309	70%
Community/technical colleges outside consortium	76	66%	366	75%
Vocational/trade schools	59	83%	323	79%
Philanthropic community organizations	92	50%	368	64%
Faith-based organizations	59	53%	279	57%
Unions	61	80%	221	79%
Seed/venture capital organizations or investors	56	23%	203	38%

Source: Urban Institute survey of TAACCCT colleges, Rounds 1-3.

Note: Colleges must have previously indicated they had this partner type to be asked this question; therefore, the number of colleges for each question varied slightly. They could indicate for each partnership type that it definitely will continue, is likely to continue, unsure, is not likely to continue, or definitely will not continue.

Sustainability Challenges

Response Category	Round 3 (Percent)	Rounds 1 and 2 (Percent)
Insufficient funding	76%	69%
Lack of potential participants, students	30%	34%
Staff time, experience in fundraising	20%	18%
Changes in industry focus	17%	24%
Insufficient partner support	14%	12%
Other	12%	13%
No major challenges	12%	14%

Source: Urban Institute survey of TAACCCT colleges, Rounds 1-3.

Notes: Round 3 N=187 (0 missing colleges); Rounds 1 & 2 N=557 (33 missing colleges). Column will not add to 100 percent because users could select more than one option.

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