Lessons from TAACCCT Round One Consortia: The Community College Transformative Change Initiative (TCI)
The Office of Community College Research and Leadership (OCCRL) was established in 1989 at the University of Illinois at Urbana-Champaign. OCCRL’s primary mission is to use research and evaluation methods to improve policies and programs to enhance community college education and transition to college for diverse learners in Illinois and the United States. OCCRL projects of this office are supported by federal, state, and private and not-for-profit organizations. The contents of OCCRL publications do not necessarily represent the positions or policies of sponsors or the University of Illinois. Comments or inquiries about OCCRL publications are welcome and should be directed to occrl@illinois.edu. This publication was prepared pursuant to a contract awarded by the Bill & Melinda Gates Foundation, the Joyce Foundation, and the Lumina Foundation for Education in August 2012 to OCCRL, College of Education, University of Illinois at Urbana-Champaign.

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Executive Summary

Under President Obama's administration, the United States Department of Labor (DOL) Trade Adjustment Act Community College Career Training (TAACCCT) program was launched in 2011 and continued with annual awards since that time. Unprecedented in its investment in community colleges, the TAACCCT grant program offers nearly $2 billion to community colleges that apply independently or as part of consortia to adopt promising reforms (many tried but not scaled) designed to transform community college education, put Americans back to work, and improve the US economy. Directed at a diversity of adult learners but most centrally low-skilled adults, TAACCCT supports the implementation of strategies that accelerate applied learning that leads to credentials and living-wage employment. Strategies key to this effort are prior learning assessment (PLA), reformed developmental education, competency-based curriculum, industry-recognized stackable credentials, and intensive student services. TAACCCT requires performance reporting on a level that most community colleges have never dealt with before, but rigorous evaluation is a critical component of the federal investment.

The Office of Community College Research and Leadership (OCCRL), University of Illinois at Urbana-Champaign, in partnership with The Collaboratory, LLC, is leading the Community College Transformative Change Initiative (TCI). The focus of TCI is to document, disseminate, and support the scaling of evidence-based strategies that improve community college student success in collegiate learning and placement in employment. The TCI is working cooperatively with TAACCCT consortium grantees to compile evidence of their transformative change processes and resulting innovations or "big ideas" that have potential for widespread adoption nationally. With the generous support of the Bill & Melinda Gates Foundation, Lumina Foundation for Education, and the Joyce Foundation, OCCRL and The Collaboratory are working collaboratively with numerous TAACCCT consortia to capitalize on the window of opportunity to scale change and grow impact.

Thus far, the TCI project has invited 19 consortia, eight Round One and eleven Round Two, involving 231 community colleges in 24 states to be part of the Transformative Change Network. The focus on consortia grant recipients is deliberate because it enables the TCI project staff to reach community colleges throughout the country that are committed to collaborative partnerships with other community colleges similarly devoted to reform. The following map displays the locations of community colleges invited to join the Network in 2013, the inaugural year of the TCI project. As new TAACCCT grants were announced in September 2013, and presumably will be in September 2014, additional consortia will be invited to participate in the Transformative Change Network and other aspects of TCI, including learning lab (professional development) events, consultative meetings, webinars, and other social media-enhanced activities. Through the Transformative Change Network, the TCI project plays a synergistic role in identifying and disseminating lessons learned about implementation and scaling of key strategies designed to grow impact in community college education, the workforce, and the economy.

This report provides brief descriptions of the key strategies and scaling plans of the eight founding Round One consortia in the Transformative Change Network. The Office of Community College Research and Leadership (OCCRL) used documents and qualitative data to develop the descriptions, with support of the lead practitioners affiliated with each consortium.

These profiles of Round One consortia provide a brief glimpse into the transformative work that community colleges are implementing under the TAACCCT grant. American citizens have an opportunity to benefit from these efforts and the TCI project is positioned to document and disseminate lessons learned in conjunction with scaling transformative change. As the TCI project matures, additional consortium descriptions and publications will be produced to tell the story of transformative change of community colleges, the workforce, and the economy.
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The Path to Accelerated Completion and Employment (PACE) initiative, led by NorthWest Arkansas Community College (NWACC) and co-managed by the Arkansas Association of Two-Year Colleges (AATYC), has engaged all 22 two-year colleges within the state, along with industry, to address the need for trained workers in career pathways that fall within two industry sectors: Healthcare and Manufacturing. In its application for TAACCCT funds, the PACE Consortium identified 10 occupations in Manufacturing and eight in Healthcare whose labor market demand showed the projected need for more qualified workers by 2016. Translated to accelerated educational programs that include stackable credentials, a total of 104 Programs of Study (certificate and degree programs) were identified to be created or impacted by this grant, including 42 at the associate degree level.

The PACE Initiative is focused on improving retention and accelerating time to completion. Three major redesign strategies are being implemented to reach those goals. Each strategy has multiple sub-strategies.

1. Transform developmental education

There are three components to this strategy: first, mandatory assessment test preparation for new students to reduce the need for developmental education courses; second, a redesign of developmental math courses using modular content tailored to targeted career and technical education (CTE) program needs, technology-based instruction, monitored self-paced mastery learning, and no repeating of mastered content; and third, a redesign of reading and writing developmental education courses. Students with higher placement scores are enrolled in College English with a co-requisite developmental education lab (Accelerated Learning Program/ALP model); students with lower placement scores are enrolled in an integrated reading and writing course that prepares them for ALP or College English in one semester (California Acceleration Project model).

All 22 community colleges in Arkansas are implementing these developmental education reforms on a limited scale through the PACE grant. Only students entering targeted CTE programs are being exposed to these reforms. However, through the Transformative Change Initiative, the assessment test preparation component is being expanded to impact all students at all community colleges. AATYC is assessing the outcomes of the developmental education course redesign efforts, and will be leading a conversation about what should and can be scaled across the colleges.

PACE COLLEGES

NorthWest Arkansas Community College
Arkansas Northeastern College
Arkansas State University at Bebe
Arkansas State University, Mountain Home
Arkansas State University, Newport
Black River Technical College
College of the Ouachitas
Cossatot Community College of the University of Arkansas
East Arkansas Community College
Mid-South Community College
National Park Community College
North Arkansas College
Ozarka College
Phillips Community College of the University of Arkansas
Pulaski Technical College
Rich Mountain Community College
South Arkansas Community College
Southeast Arkansas Community College
Southern Arkansas University Tech
University of Arkansas Community College at Batesville
University of Arkansas Community College at Hope
University of Arkansas Community College at Morrilton
To date, only anecdotal evidence is available regarding the developmental education reforms presented above. The mandatory assessment prep component is showing some very promising early results, according to a few colleges. Likewise, the ALP model for redesigning developmental education reading and writing courses has some early anecdotal evidence of success. Quantifiable outcomes data on these components are not yet available, but the PACE grant has hired an independent evaluator to produce these data.

### 2. Streamline Career and Technical Education (CTE) programs

Targeted CTE programs are being redesigned by applying several evidence-based strategies for accelerating completion of Programs of Study. Those strategies include:

- Working with employers to update curricula and reduce unnecessary content and required credit hours to complete a Program of Study;
- Providing more program structure through prescriptive and block scheduling;
- Compressing courses to reduce time to degree completion;
- Reducing in-class student seat-time by offering more hybrid instructional delivery; and
- Increasing use of Prior Learning Assessment to facilitate credit accumulation.

All 22 community colleges are applying these strategies to targeted CTE programs, including nursing and allied health, manufacturing, and information technology Programs of Study. Firm, quantifiable outcomes data on the impact of these strategies are not yet available. PACE’s third party evaluator will produce this analysis.

### 3. Intrusive Advising and Career Services

Students in targeted CTE Programs of Study receive the following services:

- Mandatory career counseling and academic advising including degree plans prior to enrollment;
- Academic progress monitoring and proactive academic support; and
- Improved job placement services, including: job aptitude and interest assessments, job opening information (including salary and benefit information), resume development, and placement assistance.

Colleges are required to partner with local workforce centers to help provide any variety of these particular services.

All 22 community colleges are providing these services to targeted students. Quantifiable outcomes data on the impact of these services are not yet available, but the PACE grant has hired an independent evaluator to produce these data.

### Scaling Plan

Arkansas’ PACE is focusing its scaling effort on transforming developmental education. Developmental education reform had been a state priority and pilot implementation grants were underway prior to the TAACCCT grant. Currently, all 22 colleges are developing test preparation services, but there is great variation in how the services are provided both in the test orientation component and in the individualized modularized curriculum. The PACE Consortium plans to establish and scale a more uniform approach to better preparing students to take the COMPASS college assessment exam that it has termed “test prep.” Better preparation involves a double strategy: providing students with a comprehensive orientation prior to taking the exam, and offering a modular, refresher curriculum to students to quickly improve their basic academic skills and retake the exam for a higher score.

While Arkansas PACE is devoted to helping students enrolled in two industry sectors, another goal of standardizing test prep is to be able to build the capacity to provide a consistent, effective approach to improving assessment outcomes for all students. Higher test scores ideally translate into less need for developmental education courses and thus, improved chances of student retention and completion.

Another goal of the scaling plan is to identify and scale the use of alternative assessment measures, including non-cognitive assessment methods to compliment the use of COMPASS, so that colleges can more holistically assess students’ preparation for college and make more accurate placements into college level courses. This is a longer term
project with the ultimate goal of broader, if not system-wide, use of alternative assessment methods to more accurately determine a student’s readiness for college level academic coursework.

Key to the plan is PACE’s partnership with the Arkansas Association of Two-Year Colleges (AATYC) that has a history of involving multiple partners to address a common problem. Before this strategy is ready to be scaled, a workgroup organized by the state’s Center for Student Success will identify the core curricular content of what will be the orientation component of test prep. The workgroup, comprised of representatives from every college in the state, will also co-develop a modular curriculum to refresh students’ basic academic skills prior to them retaking the COMPASS test.

A larger workgroup will be organized that includes college staff and faculty, college presidents, an industry partner (Murphy Oil), the Department of Workforce Services, members of the PACE leadership team, and the New Growth Group that serves as PACE’s third party evaluator. Members of this workgroup will consult with other partners that have been involved in developmental education reform in recent years to identify and then develop alternative assessments that help determine cognitive as well as non-cognitive attributes, to complement the use of COMPASS.

With support from the AATYC, The National Center for Developmental Education is being tapped to host an alternative assessment workshop, involving nationally recognized experts. Because this level of transformative change has an impact on policy, the Arkansas Department of Higher Education will continue to be involved. Once some practices with evidence of success have been identified, PACE and AATYC personnel will disseminate such practices at a statewide conference and other venues. Also, as part of the monitoring of PACE grant activities via site visits, state leaders will be able to continue the conversation, observe adoption, and promote the practices at colleges.

Based on experience gained through the development and implementation of the TAACCCT grant, PACE leaders have determined what they believe are several lessons that support a culture of innovation that, in turn, can support scaling. First, significant resources can create immediate change at scale. For example, the TAACCCT grant has allowed all 22 colleges throughout Arkansas the opportunity to integrate innovative practices into developmental education. Second, scaling what has evidence of success in one pilot across an entire state is also a workable method to make expansive change. Finally, Arkansas has invested heavily in professional development for faculty through coaches, training sessions, conference calls, and experts brought to campuses. PACE leadership cites this as a critical aspect of scaling innovation.

Thinking ahead, PACE officials have identified multiple sources of data and evidence they will gather to determine the impact of scaling test prep, including its transformative effect on the
community colleges in Arkansas. The federal reporting requirements for TAACCCT grants will provide outcomes data for this strategy (i.e., student test scores; percent of students served per college and system wide; the number of developmental education courses avoided for students who participated in test prep, etc.) in addition to qualitative data. Further, the implementation of pilot programs prior to the TAACCCT grant has yielded data. PACE officials are optimistic.

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Central California Community Colleges Committed to Change (C6) is a consortium of 10 community colleges in the central San Joaquin Valley of California and consists of rural, isolated, and economically poor communities with high unemployment rates due to the area’s agriculturally-based economy.

Some colleges in the Consortium have a history of collaboration, and the TAACCCT grant provided an opportunity for 10 colleges in the region to coalesce around the goal of reforming educational practices and policies to “improve retention and achievement rates to reduce time to completion” (TAACCCT, Round One, SGA, Priority Two).

The Consortium has organized itself in three Redesign Education Delivery (RED) teams to focus on one of three identified sectors: healthcare, agriculture manufacturing, and alternative energy. Each participating college is a member of one or more teams working to revamp or develop the associated Programs of Study for over 12 occupational areas, including: psychiatric technician, radiological technician, LVN, RN, maintenance mechanic, welder, electrician, solar installation/maintenance, energy technician.

To meet the goals of improving retention and achievement rates and reducing time to completion, the Consortium, following the research done by Complete College America, identified eight “Guiding Principles” that would help guide its work. The “structure strategy” is a mixture of the eight guiding principles that has allowed the Consortium colleges to align curricula to meet the needs of industry in the region.

The guiding principles are:
- Integrated Program design – intentionally designed, prescriptive, and coherent;
- Cohort enrollment;
- Block scheduling;
- Compressed classroom instruction, including asynchronous instruction;
- Embedded remediation of relevant math and English content;
- Transparency, accountability, and labor market relevance—clearly defined credentials, tuition rates, program duration, and placement rates;
- Transformative technology – blended learning models; use and development of open textbooks and courseware; and
- Innovative student support.

Employers, college administrators, and faculty participate as members of RED teams to coordinate training and collaboration between employers and faculty throughout the Consortium. All instructional materials developed for the grant-targeted Programs of Study are shared utilizing statewide organizations and supported by the California Community College Chancellor’s Office. Nine employers signed an MOU to commit their support to the grant activities, and 30 agreed to participate as RED team members.

With the support of industry partners, the Consortium colleges have identified the needs of the region as they relate to the three selected occupational sectors. Employers and faculty continue to meet monthly to discuss progress and employment opportunities. C6 leadership states that due to the increased level of participation from the industry partners in the region, employers have a better understanding of what the colleges are teaching.
Although some courses are different and vary from college to college, the Consortium has been able to align industry-recognized certificates at every campus and now offers equivalent similar certificates. This standardization is new to the region, and employers are beginning to see the benefits of the industry-recognized certifications.

From the inception of the grant development, C6 was committed to utilizing varied technologies to revise and develop instructional materials that would be accessible and affordable for students. Equally important, C6 committed to share materials across and outside of the Consortium. Progress to date on the development of Open Education Resources (OER) includes:

- Nurse Transitions Textbook;
- Physical Therapy Aide Textbook; and
- Medical Assistant Program (the entire program is OER, i.e. textbooks, lecture materials, tutorials, etc.).

The RED teams have held a number of “convergence” meetings—two-day work groups with specific products to be completed. Every quarter, Consortium colleges meet in work sessions where they produce materials that all colleges can use. For example, during the convergence in December 2012, college personnel wrote two OER textbooks that could be used throughout the Consortium and possibly throughout the state. The next convergence, scheduled in September 2013, will provide all of the colleges with a plan for sustainability and job placement activities. The convergence meetings are put together by RED team leaders, administrators, and college leads.

The development of these materials provides significant savings for the students. For example, for the LVN–RN Transition course, with 170 students projected, the cost for the previously used required texts totaled $301.40 per student. With the new OER available, students can access the textbooks online for free or can print on demand for $25-70 (black/white or color copies).

In addition to the materials developed to date, the Consortium is working on developing OER for the Psychiatric Technician Program, with the expected savings of over $175 per student, along with developing an E-platform tutorial to be used across the Consortium by students preparing for the Manufacturing Skills Standards Council (MSSC) safety and quality certification assessment. Work is also progressing with the development of basic skills and faculty training manuals, along with exploration of other OERs during the three-year grant period.

To date, the Consortium has served over 1,300 students in the impacted Programs of Study. All of the courses that are offered have been changed to adapt to the structure strategy, and all curricula have been modified to meet industry standards.

Scaling Plan

Understanding that the TAACCCT grant provided the California Central Valley community colleges with an opportunity to transform the design, structure, and delivery of education at the participating Consortium colleges, C6 recognized the potential for their success to be replicated outside of the region. The scaling targets include the San Joaquin Valley region, throughout California, and other TAACCCT consortia or community colleges across the country. Additionally, C6 recognizes the potential for the OER to be useful to additional disciplines.

To date, there have only been a few programs that have completed the coursework for certification. However, the Consortium is beginning to recognize that the structure strategy has created programs that are more attractive for students. For example, all of the courses offered through grant funds must be compressed. A vocational nurse program (LVN),
originally 18 months in length, is now 12 months. Students are excited to learn that they can complete programs faster and in a cohort that allows them to progress through the classes together and help each other. To date, C6 leadership cites the guiding principle/strategy of Embedded Remediation as “very promising.” C6 officials report that attrition rates have dropped in allied health and manufacturing courses.

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The impetus for the DE redesign was the disconnect between the skills needed to succeed in college level technical programs and the actual skill levels of many individuals who seek entry into these programs. This disconnect, along with recent research, gave the Consortium an opportunity to address DE, a problematic, pervasive, and systemic barrier to college completion. The cornerstone of the redesign is the restructuring of remediation so that students can complete their DE requirements in one semester of English/reading and one semester of mathematics; STEM students may require two courses.

On the front end of the redesign is the development of a more accurate assessment of student competencies, a joint effort of the COETC and Pearson, with an expected implementation date of spring 2015.

In conjunction with career advising, students who test below college level are enrolled in a quantitative literacy or algebraic math course, and/or an integrated English/reading course that prepares them for success in their chosen discipline and career path. The DE redesign embodies the following strategies: mainstreaming students into college level courses with “just in time” remediation whenever possible; integrating reading and writing; providing no more than one semester of remediation for most students; and implementing backward design from college level courses, focusing on the skills students need to be successful in college courses.
Contextualization of math skills into courses in the energy programs reduces the time to completion, promotes retention of students, and increases the number of completers. As of fall 2013, all seven colleges have contextualized math skills into their energy programs. Some of the colleges have taken existing math courses that were traditionally required for AAS degrees and contextualized the course material for the specific program. Contextualized modules also provide “just in time” remediation within the energy programs. The seven colleges are posting all their curricula materials as Open Education Resources (OER), allowing colleges to share resources. The colleges are also continuing to develop additional modules and embedding more contextualized math skills into the content courses.

The redesigned curriculum, which replaced the traditional developmental sequence, has been approved and is in place. Four of the fifteen Consortium colleges are moving to full implementation in fall 2013, and the remaining colleges are moving toward full implementation. By fall 2014, the redesign will be fully implemented at all colleges in the Colorado Community College System.

2. Build programs that meet industry needs in flexible, stackable credentials that lead through career pathways, through the development of online and hybrid certificate and degree programs

The energy-related goal of COETC was to make available a wide selection of degree and certificate programs in the energy industries to individuals across Colorado. Using technology based delivery methods and acceleration of DE, students from across the state can quickly and conveniently complete certificate and degree programs in energy programs, with skills for immediate placement in high paying and “in-demand” jobs. The following material produced with grant funds will be available as OER:

- curricula developed for online and hybrid delivery; all contextualized curricula developed as math (MAT) courses and as modules for delivery in energy program courses; all materials for the MAT and College Composition and Reading (CCR) developed as part of the DE redesign; and all materials used in presentations and professional development.
- As of fall 2013, the seven colleges have completed 14 certificate or degree programs in a completely online or hybrid format. Within the next year these colleges will add 10 online and/or hybrid degree and certificate programs.

To accommodate course materials that require hands-on, face-to-face interaction, the colleges are providing alternatives such as weekend training and short-term residency workshops. Three colleges (Colorado Mountain, Red Rocks, and Pueblo) have built Mobile Learning Labs to provide hands-on experiences.

3. Provide wrap-around, intrusive student supports, including career advising

To support accelerated DE courses and technology driven learning models, COETC recognizes the role non-cognitive and affective dimensions play in student learning. To meet that need, the colleges provide students with access to academic success strategies, college readiness skills, and career counseling. COETC encourages colleges to choose the strategies they will employ, such as academic advising.
career coaching, case management, orientation, goal setting, and academic planning, eliminating late registrations, first-year experience, student success courses, tutoring, supplemental instruction, and/or other data-informed strategies that address barriers to student success, retention, and completion. The career coach at each college provides much of the career planning and academic advising for students enrolled in the energy programs and/or in developmental education programs.

Each college is developing a plan that engages DE students from their first contact with the college through the completion of their remedial course, entry into college-level work, completion of a degree or certificate, and ultimately into employment. Colleges are identifying how coaches help students plan for success through assessment and placement, orientation, academic goal setting and planning, and/or through the registration process. The plans outline how the college initiates student success through intentional strategies that support positive student outcomes. As the colleges move forward with implementation of the DE and the energy program redesign, plans will be finalized and published. This recommendation for student services was based on the work done by the Center for Community College Student Engagement that was published in “A matter of degrees: promising practices for community college student success” (2012) (http://knowledgecenter.completionbydesign.org/resource/452).

To determine which strategies have the most impact on student success, retention, and completion, the colleges and Consortium will track students to identify the most successful interventions.

COETC is supporting this effort with professional development. To date, the Colorado Community College System (CCCS) has facilitated four statewide Regional Student Services Workshops that were attended by 151 student services staff from 12 of the Colorado colleges. Additional efforts include identifying student services experts to be mentors for other student services staff, and the creation of webinars on particular topics, such as intentional advising and career exploration, which will be made available to all Consortium colleges.

Scaling Plan

COETC’s scaling plan is a two-part strategy to increase access and completion for students in career and technical education (CTE) programs in energy-related fields. The first part of the strategy is to employ technology to create online and hybrid programs that will be accessible to CTE students across the state. This energy-focused effort is on target to be completed by 2014. The second part of the strategy is to redesign DE to allow all students to move more quickly into college-level course work.

Although initially conceived with the TAA population in mind, this strategy has major systemic implications for increasing college completion in all CTE, as well as general education programs.

Having achieved statewide policy reform in support of redesign, the challenge of achieving broad-based and meaningful change now rests with implementation on Colorado’s community college campuses. In the process of transitioning from a statewide mandate of DE reform to a locally driven effort, COETC has drawn on the faculty leadership and expertise of the state’s Developmental Education Taskforce and its Core Implementation Teams. The task force was created in September 2012 and met for 18 months. Thirty-five individuals from all thirteen Colorado Community colleges, two local district community colleges, and the state community college system office, the Department of Higher Education, and the Denver Scholarship Foundation looked at state and national models. DE reform did not just look at curricula; it looked at the entire process from the students’ perspective. Relying on data, the subcommittees explored specific topics (i.e. assessment, testing, English and reading, math, acceleration, contextualization, and student services).

A critical feature of scaling is continuous improvement through ongoing, robust evaluation. COETC has a strong evaluation component through Rutgers University that will help the initiative capture the learning from early implementation. This learning will include descriptive data that can inform the colleges about how the variables of professional development, leadership, and different formats of student support impact academic outcomes, outcomes which would otherwise fit into a narrow band of discreet categories of specific strategies.

This project provides a significant research opportunity for Colorado colleges to evaluate a broad spectrum of strategies that will be employed in implementation: online and hybrid course delivery; acceleration of DE through mainstreaming, just in time learning, contextualization, and modularized learning; mobile...
learning labs; career coaches; and student services strategies. Determining which strategies have the most impact on student success, retention, and completion is crucial to maximizing learning and moving forward in replicating and scaling across colleges. The Rutgers team, in conjunction with the core COETC team, will provide this critical quantitative and qualitative data to maximize the long-term impact of the project at both the state and the national level.

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The Transformation Agenda (MCCWDTA) brings together all 15 Massachusetts’ community colleges; the Commonwealth’s higher education, economic development, adult basic education (ABE), and workforce development systems; and industry stakeholders to transform the delivery of education and training programs. The initiative has dual goals to achieve structural, systemic change of education that results in a more integrated system that provides efficient career pathways and assists students’ attainment of certificates, degrees and jobs. Through accelerated programs linked closely to industry need, the Transformation Agenda is building a systems approach to enable greater economic opportunities for Massachusetts residents.

MCCWDTA is developing career pathways in three priority economic development areas targeted by the Commonwealth: Health Care, Life Sciences and Biotechnology, and Information Technology. Secondary regional sectors include Clean Energy, Financial Services and Entrepreneurship, and Advanced Manufacturing.

MCCWDTA is implementing four key strategies to accomplish their goals. They include:

1. **Providing navigators, career coaches and achievement coaches**

All Massachusetts community colleges are increasing the support services available to students as a central strategy to improve access, retention, and completion. These supports begin with college and career navigators that have been hired by every community college in the state.

Navigators are embedded at the local One-Stop Career Center to help career center customers identify and pursue community college credentials. Support services are also being expanded on every campus, where they take the form of achievement coaches who work with students who may be struggling in the classroom, and/or career coaches who help students identify and pursue the certificate or degree pathway that will lead them to their career goals.

According to MCCWDTA officials, early evidence indicates that the navigators have led to an increase in One-Stop Career Center customers attending community colleges. In addition, colleges report anecdotal impact of the achievement and career coaches in increased retention and completions among students at higher risk for success. Data available August 2013 show that of the 14,425 credits attempted, 11,760 were completed, an 83% completion rate.

Additional results of the navigators include stronger relationships between community colleges and the state’s Workforce Investment Boards (WIBs) and One-Stop Career Centers, which demonstrate an example of leveraging resources.
2. Redesigning developmental education

All 15 MCCWDTA colleges are eliminating the barriers to college experienced by people with basic math and literacy needs. College faculty and adult basic education (ABE) instructors from across the state worked with industry partners to develop contextualized curriculum modules aligned to the three industries. The curriculum is in use at 11 of 15 campuses, as another means of accelerating the learning process for students working toward community college credentials and careers. In addition, all colleges are implementing acceleration strategies for developmental education that include boot camps, self-paced learning labs, co-enrollment in developmental and college-level courses, and/or embedded remediation into course content. Anecdotal evidence suggests a higher rate of matriculation from developmental education to college-level courses, which will be examined by evaluation data available fall 2013.

3. Reshaping certificate and degree programs

All 15 community colleges are reshaping certificate and degree programs to accelerate learning and completion and to ensure alignment with industry needs. To date, 101 programs have been redesigned as focused, more efficient pathways leading from developmental programs to certificates and degrees.

These programs, developed in concert with industry partners, are designed to accelerate student progress through strategies that include condensed, 8-week terms, stackable credentials, and articulation from non-credit to credit-bearing courses. Many programs have internship or on-the-job training components. To date, 2,355 students have enrolled out of a projected 5,293 targeted for enrollment over the 3-year grant period.

4. Utilizing technology

The Consortium is expanding its use of technology in a variety of ways to improve program offerings and the ability of graduates to obtain jobs in high-demand fields. First, all community colleges, public colleges, Department of Higher Education, One-Stop Career Centers, and state agencies are utilizing real-time labor market data available through Help Wanted OnLine Analytics, in order to develop workforce development priorities and industry-informed curricula. In addition, several colleges are delivering online or hybrid content, and the eight colleges with advanced manufacturing programs have begun working with the Massachusetts Institute of Technology (MIT) to develop technology-enabled components to enhance and expand access to advanced manufacturing training across the state. Lastly, the Consortium is exploring the development of technology-enabled career coaching and job placement tools that can be used across the community college system and at all One-Stop Career Centers. The envisioned technology would serve as an assessment, planning and tracking tool for students and be linked to real-time labor market data so that career decisions and job search efforts are rooted in knowledge of labor market opportunities.

Scaling Plan

Building on the cross-system collaboration in the state between the community colleges, One-Stop Career Centers and WIBs, and the corresponding state agencies, MCCWDTA seeks to develop shared mechanisms and practices to assist students with career planning, coaching, and placement. Colleges recognize that for students to effectively embark on career pathways that lead efficiently to college credentials and jobs, they must
revamp their approach to advising by applying electronic advising systems and data analytics to closely monitor students’ course-taking plans and behavior, track progress toward critical benchmarks, provide frequent feedback directly to students, and signal appropriate interventions before students fall behind or veer off course. Partners in the One Stop Career Centers are also seeking to revamp the approach they are taking to career planning and placement. Together, they are working to develop a more efficient, technology-enabled approach to delivering coordinated services and direct support among the colleges and the One Stop Career Centers.

MCCWDTA has significant experience in attacking this issue from the perspective of the deliverer of services. Some colleges and One-Stop Career Centers have implemented some aspect of this vision in a way that meets the local needs. This entrepreneurial approach is present in numerous locations and is being channeled into the larger approach. Developing a platform that can integrate with existing data systems, and not build a new super-system, has significant financial and human capital savings, buy-in from the front-line users, and large-scale ramifications for replication.

The Consortium recognizes it will need additional talent, knowledge, and technical skill to scale its vision. One need is to develop an interface, or platform, driven by the student with integrated access to appropriate data within the varied systems. To make this vision a reality, MCCWDTA is actively seeking collaborators in other states, among national organizations and foundations, from colleagues at the Massachusetts Institute of Technology, and from the state’s technology firms. The Consortium is also broadening its engagement with national organizations that aspire to a similar vision and have some technological capacity.

The resources to support this endeavor come from current TAACCCT funding as part of capacity building and from the engagement of partners. Also, each state agency that will be serving students at a higher level with this innovation will be asked to allocate resources to the ongoing maintenance of this product. Additional resources will be sought from foundations and other firms that have an interest in developing this technology-enabled solution.

Three data sets will be analyzed to develop the technology-enabled, coordinated career planning and placement system. These include user profiles in the One-Stop Career Centers’ MOSES system and student data from the Higher Education Institutional Research System (HEIRS). These will help develop a profile of the new system’s users, which will inform the nature of the system developed. The Consortium also intends to gather data on utilization and participant outcomes from the technologies that are currently in use. These disparate systems comprise portions of the full system that will eventually be developed.

Once a system is designed, it will be piloted at several locations throughout the state. Data from the pilot will be collected, including qualitative analysis of the user experience from the perspective of job seekers and staff as well as quantitative data on outcomes for users, including but not limited to job placement data. Those data will be analyzed to make improvements to the system prior to replication at the One Stop Career Centers and community colleges across the state.

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MoHealthWINs is a statewide consortium that includes all 12 Missouri community colleges and Linn State Technical College. The Consortium is focused on improving and expanding health care education opportunities throughout the state. It contains schools in urban, suburban, and rural locations, as well as populous, multi-campus, and single-location schools. The Consortium is currently serving more than 1,200 participants; 40% of this group is attending college for the first time and 80% were either unemployed or under-employed when they started the MoHealthWINs program.

MoHealthWINs aims to transform the delivery of academic programs within the state. Missouri's governor called for the state's colleges to build a consortium that would be the colleges' first collaborative effort at building programs and designing innovative systems to benefit students at a state-wide level. Missouri colleges, led by Ozarks Technical Community College, have banded together to increase the training and employment of Missouri's citizens in four health services/sciences occupations: health informatics, therapeutic services, diagnostic services, and support services. Consortium colleges are collaborating on program design; developing new courses and redesigning existing ones; eliminating redundancies in program offerings; and developing and assessing innovative practices to attract students to new programs and support their successful completion. Colleges work together and share success stories, best practices, and lessons learned.

MoHealthWINs identified twelve occupational areas within the health science career cluster, including short (less than one year) certificates and two-year degree programs. Some of the programs include: health information technologist, certified nursing aide, pharmacy technician, phlebotomist, hearing instrument technician, and maintenance technician, along with nursing (associate degree). The project work plan includes 15 objectives that directly support the introduction of varied health science certificates and degree programs, along with the enhancement of several existing certificate programs.

The activities instituted to address the four strategies in the Round One SGA include:

- Develop diagnostic assessments, remediation, and career counseling services;
- Introduce contextualized academics within technical skills framework and foundational courses;
- Offer non-semester-based scheduling along with modularized, accelerated, and/or self-paced courses;
- Develop online or hybrid courses and programs;
- Enhance training with online simulation offerings;
- Provide tutorial support and supplemental instruction as needed;
- Provide intrusive student support including tutors, retention counseling, internship and practicum experience (earn/earn opportunities);
- Develop standard practices to award credit for prior learning and/or non-credit training;
- Develop industry-driven credentials, certificates, and degrees; and
- Structure Programs of Study into stackable credential career pathways.

MoHealthWINs Colleges

- Ozarks Technical Community College (lead college)
- Crowder College
- East Central College
- Jefferson College
- Linn State Technical College
- Metropolitan Community College
- Mineral Area College
- Moberly Area Community College
- North Central Missouri College
- St. Charles Community College
- St. Louis Community College
- State Fair Community College
- Three Rivers Community College
The Consortium has experienced growth and expansion in the networks and affiliations as it has implemented grant activities. Moreover, it recognizes that continued progress requires the involvement of executive leadership and staff at each college. Chief financial and academic officers as well as faculty, student services staff, peer tutors, advising teams, developmental education, and financial aid staff are necessary to sustain MoHealthWINS innovations. The Consortium and its members will continue to engage with state entities, such as the Division of Workforce Development (DWD), the Missouri Department of Higher Education (MDHE), and Department of Labor and Industrial Relations (DOLIR). Employers are crucial partners to advise on the skills and credentials of candidates completing the Programs of Study. Workforce Investment Boards (WIBs) are a critical link between the colleges and employers that provide current information regarding training and credential needs while programs are being developed. Accrediting bodies, such as the MDHE and the DWD (WIA approval) are involved to ensure a timely approval process on new training and curricula.

Advisory councils and stakeholders regularly and systematically provide feedback to ensure that little time is wasted on unproductive and unhelpful tactics and time is maximized on tactics that can produce clear benefits and progress.

To date, the Consortium colleges have utilized TAACCCT to institute non-semester-based scheduling; chunked, stacked, and latticed credentials; revamped developmental education; included digital literacy; contextualized academics; expanded online and hybrid learning; added career blueprinting; and instituted intrusive student support services.

Evaluation results reveal progress with the TAA-targeted population. Current enrollment stands at more than 1,200 students, and by the end of 2013 participant enrollment is anticipated to surpass 2,000. MoHealthWINS leadership reports that program acceleration and program structure based upon industry-recognized stackable credentials, when combined with contextualized development education and intrusive student support systems, continue to produce positive results.

According to the Consortium, by August 2013, the colleges will have close to 400 program completers, and nearly 1,000 with at least one industry-recognized credential. The current ratio of credit hours completed to credit hours attempted stands at 86%, and the term-to-term retention rate is 90%. MoHealthWINS leadership is very encouraged with these interim outcomes.

Although each co-grantee college is exploring a number of innovative approaches to serving the target population, an integrated approach of the following innovations form the basis for Missouri’s transformative change process:

- Contextualized Developmental Education;
- Credit for Prior Learning and Work Experience;
- Intrusive Support Services & Intervention;
- Non-Credit to Credit Bridge Programs;
- Program Acceleration and Course Modularization; and
- Technology-Enhanced Online Access and Learning.

Of the innovations listed above, MoHealthWINS cited the combination of Intrusive Support Services and Contextualized Developmental Education. MoHealthWINS’s “mind map” from the June 2013 Scaling Forum.
Developmental Education as the linchpin innovation for this integrated approach. Intrusive Support Services have been designed specifically for adults and the needs of the TAA-targeted population. These supportive services provide academic assessment services and career pathway counseling beyond what a traditional community college student might receive. In addition, the services are designed to aggressively provide support and advice during the initial stages of enrollment. Such services are designed to increase student confidence, as well as provide a clear pathway to completion. As students move through their Program of Study, the intrusive student support services continue to assist with academic issues and challenges, but they begin to shift their focus to program completion, career blueprinting, and employment. This model allows not only highly intrusive support, but also evolves to customize the types of support needed at different times in the program.

Recognizing the unique needs of unemployed and underemployed adult learners in these programs, the program staff, faculty, and administrators have focused on moving the population to college-ready and removing the barriers to completion and employment.

Scaling Plan

As part of their commitment to sustain and share the success of their grant activities, the grant leads at each college convened to discuss the TAACCCT grant activities and identify a scaling plan. Developmental Education and Navigation were combined into one innovation because the two together produce the most important result: completion. While most of the institutions have piloted developmental education and navigation within their MoHealthWINs grant programs, the scaling project provides a blueprint to allow all Missouri public two-year institution students increased access to these varied innovative services, delivery models, and curriculum enhancements.

The Consortium has given highest priority to implementing a statewide accelerated, modularized, competency-based model for quickly moving adult learners successfully through career pathway-integrated programs. The model includes the following: college portal programs, adult learning academies, adult developmental education assistance, intrusive student support services, career coaching, college navigators, assessment testing services, and career blueprints.

While some Consortium colleges will scale institution wide (to all departments) others will implement changes in organizations beyond the institution, including feeder schools, university partners, and key stakeholders. The Consortium disseminates information on the TAACCCT grant and Consortium scaling activities at monthly scaling team meetings, the MCCA Annual Convention, semi-annual regional training summits, Consortium colleges’ in-service professional development days, advisory meetings, TAACCCT Consortium meetings, and video conferencing. Information is provided to new partner organizations, such as healthcare organizations and the public workforce system; and through the use of a central repository of scaling initiatives via Basecamp subscriptions.

The Consortium’s current evaluation plan calls for the continued tracking of performance outcomes associated with retention, persistence, completion, and employment. Given the current performance data, MoHealthWINs leadership believes that scaling of contextualized developmental education coupled with intrusive student support systems and navigation can result in a widespread increase in retention and completion outcomes. MoHealthWINs intends to create a model that will be applicable and scalable to other subject areas.

“Missouri is scaling the on-ramp, what we call ‘the portal,’ -- that foundational piece that’s going to take the population that we know we need to help, get to a place that they are college ready."

Dianne Lee
Professor and Academic Lead, MoHealthWINs

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Credentials, Acceleration, and Support for Employment (CASE) is a statewide Consortium that includes all 17 Oregon community colleges, the Oregon Employment Department/Trade Act, and employer and community partners. All 36 Oregon counties are served with training locations throughout the state. CASE targets five main industry sectors with multiple occupations within each area:

- Business and management;
- Food and natural resources;
- Healthcare;
- Human resources; and
- Industrial and engineering systems.

With the CASE initiative, Oregon is developing 28 new Career Pathway Certificates of Completion and enhancing 24 existing Career Pathway Certificates of Completion in the targeted industry sectors. The certificates consist of 12-44 credits and are wholly contained in larger certificates or degrees. The initiative’s goals include increasing the number of Oregonians with certificates, credentials, and degrees and easing student transitions from education to employment. CASE is committed to serving over 3,500 participants over the life of the TAACCCT grant by implementing the following three braided strategies.

1. Career pathways

Oregon established a statewide approach to Career Pathways in 2004 that was scaled to all 17 colleges by 2007. Since 2007, more than 175 Career Pathway Certificates have been approved; however, additional pathways are needed to address gaps in emerging and projected growth occupations. A critical component of Career Pathways is the development and expansion of bridge courses designed for students who are not yet ready to enter career and technical education (CTE) courses at the credit level. Two types of bridge courses are a part of Oregon’s Career Pathways Initiative and also a part of CASE: one contextualizes multiple occupations with career planning and transition services into adult basic education (ABE); the other contextualizes Vocational English as a Second Language (VESL) with CTE.

Enhancements to existing pathways include additional employer input, flexible scheduling, and alternative delivery methods that are intended to result in increased access, persistence, and retention for students. Each college has updated its internal webpages to reflect new and enhanced Career Pathways opportunities and roadmaps. The state-level website also reflects these new enhancements.

Additionally, all career coaches in the CASE Consortium are utilizing Career Pathway Roadmaps as a tool for student education and career planning.

2. Career coaches

Embedding one or more career coaches at each community college is a linchpin of the CASE approach. Coaches were trained using a nationally
recognized Career Development Facilitator curriculum. Coaches provide individualized or cohort-based, wrap-around student support services to recruit, enroll, and retain students through completion of their education and employment goals. Wrap-around services include:

- Assistance with career planning that involves assessment leading to the identification of appropriate certificates or degrees;
- Referral to student federal financial aid and other tuition assistance programs;
- Connection to college services for student success, such as tutoring and academic advising;
- Referral to community resources such as child care, health care, and other individualized services;
- Outreach and coordination with employers for internships, co-op education credit, and other ‘learn to earn’ opportunities; and
- Partnering with local workforce partners such as Workforce Investment Act (WIA), Trade Adjustment Assistance (TAA), and WorkSource centers to coordinate students’ job search and placement activities.

3. Credit for prior learning

CASE resources are being used to align internal college Credit for Prior Learning (CPL) processes and procedures with newly emerging state-wide standards mandated by Oregon House Bill 4059 (2012). At the time the TAACCT grant was written, CPL was described as “limited,” “not well defined,” and “not well utilized.” Through the CPL Community of Practice, various methods of granting credit for prior learning are being identified and defined; and guidance for portfolio development is being written. The lead college for the grant (Clackamas) is developing an e-portfolio model. These methods may include but are not limited to:

- Credit by examination;
- Transcripted military training and experience;
- Documented learning of work experience via portfolio; and
- Evaluation and assessment of industry-recognized credentials.

These methods are expected to result in a statewide increase in the number of credits earned through CPL. The CASE initiative is also building upon previously documented military training crosswalks and expanding the visibility of programs. Using the American Council on Education (ACE) credit recommendations, three additional college certificate programs will be crosswalked with military training by the end of the grant. Ultimately, the number of veterans who are awarded college credit for their military experience and training is projected to increase.

The CPL Community of Practice is composed of six lead colleges that, during the first year, explored aligning CPL strategies with the Council for Adult Experiential Learning (CAEL)’s national standards. By year two, all Oregon community colleges were participating in the CPL Community of Practice to identify common needs, share best practices, and develop portfolio guidelines that will be adapted and adopted for individual institutional use.

Scaling Plan

Oregon’s scaling project includes plans to implement the best practices of the career coach strategy. CASE leadership envisions a menu of best practices, allowing colleges to add components as existing resources are available. These changes are expected to result in each college having an intentional and visible set of services and partnerships.

Common to all colleges, implementation of the scaling plan will:

- leverage, maintain, and develop institutional partnerships internally and externally and sustain communication with key stakeholders while remaining focused on the student’s individual journey;
- increase the understanding of community partner goals and missions while working together to support students and leverage additional resources.
From the beginning, CASE has involved external partners in planning, managing, and leading the CASE initiative. The Consortium will achieve its scaling goal by continuing to engage stakeholders, content experts, and CASE leadership through a collaborative statewide communication and technical assistance effort. CASE acknowledges that in an environment of limited resources, professional development of faculty, staff, and leaders will be critical to integrating best practices into existing organizations. This will require commitment of institutional and state leadership to identify the resources necessary to support the costs associated with scaling.

Key partners include the Oregon Presidents' Council, the Council of Instructional Administrators, the Council of Student Services Administrators, TAA, the Oregon Workforce Partnership, the Career Pathways Community of Practice (the Pathways Alliance), the Career Coach Community of Practice, and the Credit for Prior Learning Community of Practice.

Data collected through the CASE grant will measure the impact of the transformative change process. The CASE project has contracted with a third-party evaluator to engage the college partners in an assessment of the efficacy of the braided strategies that are a part of the grant commitment. These data and the accompanying narratives will inform the year-three grant work and also provide valuable data to inform implementation of the scaled strategies. Questions that will be addressed include what is working, what is not, and what strategies can survive and contribute to a scaled model. Comparison data will be available after October 2013; wage gain and employment data will be available spring 2014.

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The Health Professions Pathways (H2P) Consortium is a national consortium comprised of nine colleges in five states that are implementing strategies designed to improve health professions education. By streamlining and enhancing educational pathways and decreasing time to completion, the participating colleges aim to increase students’ credential attainment and employment in needed occupations within the healthcare sector. H2P colleges are implementing eight strategies designed to achieve the following TAACCCT Round One SGA priorities:

- Accelerate progress for low-skilled and other workers;
- Improve retention and achievement rates to reduce time to completion;
- Build programs that meet industry needs, including developing career pathways; and
- Strengthen online and technology-enabled learning.

The H2P colleges’ targeted Programs of Study (POS) fall into three career pathways: Therapeutic Services, Diagnostic Services, and Health Informatics. A total of 85 POS are being developed or have been enhanced as a result of the TAACCCT grant. The most common POS are within the Therapeutic Services Pathway and are related to nursing occupations.

Reflecting the DOL priorities, the Consortium’s shared vision is to “not only produce a highly skilled healthcare workforce but also galvanize a national movement to dramatically redesign and enhance health professional education and training through national curricular reform, industry engagement, innovative practices and programs, and intensive usage of data and accountability systems to ensure student success and program excellence” (H2P Proposal, pp. 1-2). In 2013, the H2P Consortium modified its scope of work to include the production of high fidelity, online learning enhancements for H2P’s competency based healthcare Core Curriculum (Priority Four).

All nine H2P colleges are committed to implement the eight following strategies to create new pathways that are developed through employer, education, and workforce partnerships. H2P leaders describe their model as a “career pathways framework with a competency-based Core Curriculum” (Technical Proposal, p. 11).

1. **Online assessment and career guidance**

H2P colleges proposed to implement online approaches to Prior Learning Assessment (PLA), employ online career advising tools, and enhance career advising services. H2P colleges are using the Virtual Career Network (VCN), an open source platform built by the American Association of Community Colleges (AACC) that allows users to customize the tools to meet colleges’ particular needs and interests. Colleges are also using the VCN to enhance career guidance so students have another resource to better understand their career options in health professions. Early evidence based on implementation evaluation data from the third party evaluators reveals that most of the colleges are using online career advising tools to enhance career guidance services. However, data were gathered early in the implementation of most strategies, and at that time there was little evidence of new approaches for granting students credit for prior learning via the VCN or in other ways developed or adopted by the colleges.
What we’re about is changing educational experiences for students from the linear model (courses and curriculum) to a pathway model that enables completions and employment.”

Marianne Krismer, H2P Consortium National Director, Cincinnati State Technical and Community College
whom are located at the local workforce centers (at least part-time) to better reach the target population, and others are at the colleges. Colleges are adopting an intrusive advising model, new to most H2P colleges, that expands the traditional advising role. Consistently, H2P teams indicated that having a dedicated completion advisor is a key contributor to student success, though this claim has not yet been substantiated with data.

6. Training programs for incumbent health professions workers

Incumbent worker training programs associated with H2P involve employer commitment to “training lower-skilled workers for more advanced positions” (H2P Technical Proposal, p. 19). By locating training programs at the worksite, healthcare workers have increased access to educational programs including the support systems that help them navigate the often unfamiliar world of higher education. At least seven of the H2P colleges indicated they had incumbent worker programs prior to TAACCCT, but they were difficult to sustain due to costs, available faculty, and other reasons. With input from experienced, large healthcare systems, the H2P Consortium is developing a more structured process so more colleges and local employers can establish sustainable programs and help measure the return on investment for the healthcare organization. At the time data were collected, seven colleges were still in the planning stage of this strategy; two colleges had an incumbent worker training program with enrolled students.

7. Enhanced data and accountability systems

Efforts made by Consortium colleges to enhance data and accountability systems have focused on steps to collect and submit reliable data for the Quarterly Performance Reports (QPRs) and Annual Performance Reports (APRs) to the Department of Labor, and include hiring and training a data manager, building internal relationships, integrating data from multiple systems, and implementing processes for the transmission and sharing of data. Further, H2P colleges are pursuing strategies to increase the use of data for program improvement and to use data at the program, local, state and national levels to support the continuation of strategies that have demonstrated outcomes. The H2P Consortium was one of the Round One grantees that hired a third party evaluator (TPE) to be able to respond to the DOL reporting requirements and to expand the use of data for local decision-making.

8. Galvanize a national movement

All colleges in the H2P Consortium are actively participating in this strategy, hosting summits, convening annual meetings, and actively participating in national organizations. Multiple partners in myriad healthcare occupations, at accrediting agencies, and with other stakeholders have vested interest in a Core Curriculum. Full implementation and accomplishment of this strategy is not expected until the culmination of the grant and is anticipated it will continue beyond the grant period.

Scaling Plan

Of the eight strategies implemented among the H2P co-grantees, this Consortium chose to scale the creation and implementation of a Core Curriculum because of its potential transformative impact on health professions education by standardizing entry-level expectations and formatting a foundation for practice for all healthcare practitioners. Achieving this goal will also involve another strategy (Galvanize a national movement to improve healthcare education). The target of improving healthcare education is predicated on the industry's formal recognition, via a credential, of the importance of a core set of knowledge and skills shared by all healthcare practitioners.

Scaling the successful strategies and practices learned in this initiative was a goal of the H2P Consortium at the time the grant was written. Strategies and activities conducted by the co-grantee colleges and the national office at Cincinnati State Community and Technical College (CSTCC) include providing technical assistance on developing Core Curriculum; evaluating and disseminating findings; allowing flexibility in curricula to accommodate community, regional, state, and employer needs; providing open source licensing of courses and curricula; inviting non-H2P colleges to national meetings where Core Curriculum is discussed; involving diverse stakeholder groups at national summits on Core Curriculum; developing strong workforce partnerships; and publishing white papers on these topics.

H2P has engaged and continues to grow partnerships at the state and national levels. H2P has a
National advisory council of 22 members, including representatives from community college state systems, large healthcare provider systems, healthcare educational associations, healthcare and other large private foundations, community college presidents, workforce boards and agencies, and accrediting agencies. Norton Healthcare (Kentucky) is an active employer partner in the Consortium and on the scaling team.

To accomplish the scaling goals, H2P leaders have identified additional partners: The American National Standards Institute, the Clinton Global Initiative (CGI), the Teaching Institute for Excellence in STEM, iSEEK Solutions, The Collaboratory, the National Network for Health Professions Programs in 2 Year Colleges (NN2), the Health Professions Network, the American National Standards Institute, and the Office of Community College Research and Leadership (OCCRL) at the University of Illinois. These partners represent experts in credentialing, professional regulation, instruction, career advising, program evaluation, and scaling impact, among other areas.

Scaling the Core Curriculum strategy will be supported by the Core Curriculum Community of Practice led by co-grantee El Centro College; their representatives are active members of the H2P Scaling Team. The H2P Scaling Team also consists of college, industry, and workforce partners and enlists the facilitation expertise provided by the Community College Transformative Change Initiative (CCTCI) staff.

Plans for scaling include providing two Summits in 2014, one on Core Curriculum and the other on developing effective workforce/education partnerships. The Summits will include co-grantee colleges and invitees from their regions to learn about the promising practices of the Consortium as well as learn from national subject matter experts. The Workforce Partnership Summit is planned for March 29, 2014, as a preconference to the annual National Association of Workforce Boards meeting in Washington D.C. The Core Curriculum Summit is planned for late May 2014 at a location to be announced.

Further, H2P was written into three grant proposals for TAACCCT Round Three that plan to adopt the Core Curriculum concept. If any of these grants are funded, there will be opportunity for the new TAACCCT grantees and their partners to participate in the Summits.

H2P leadership is hopeful that funding opportunities with TAACCCT and other private funders through the CGI will enable them to continue to scale. The Commitment that has been accepted by the CGI is to scale competency-based Core Healthcare Curriculum to 100 community colleges and their workforce partners by 2016. H2P Scaling Teams will provide a series of institutes and technical assistance. With this model, H2P will have a train-the-trainer approach that should result in significant scaling within a relatively short period of time.

As scaling occurs, data collection and analyses conducted by the third party evaluator, the Office of Community College Research and Leadership at the University of Illinois, will inform future implementation. Improvements will be supported with evidence-based outcomes and a continuous improvement model.

H2P leaders often cite their TAACCCT project as an impetus to “galvanize a national movement.” To keep the momentum and scale the work, additional financial resources will be needed. One way to scale these resources may be to make a case for the financial efficacy of establishing a Core Curriculum, an effort that is underway. Resources from business and funders who are stakeholders in the vision will be leveraged to provide evidence in support of the transformative change envisioned by this Consortium.

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The National STEM Consortium (NSC), led by Anne Arundel Community College in Maryland, is an effort of ten community colleges in nine states to develop nationally portable certificate programs in Science, Technology, Engineering and Math (STEM), and to build a national model of multi-college cooperation in the design and delivery of high-quality, labor market-driven occupational certificate programs. The certificate-level credential is a missing, but critical, on-ramp to career pathways for adult learners and others who often lack access to and awareness of high-demand careers in STEM fields.

NSC is targeting five industry areas in the broad STEM field: Composite Materials, Cyber Technology, Electric Vehicle Development and Repair, Environmental Technology, and Mechatronics. These areas were selected based on member colleges’ local workforce needs and projected careers in which students could expect a strong return on their investment in higher education.

The scope of this project contributes to the goals and priorities in the TAACCCT Round One grant. However, based on the needs analysis conducted through an extensive community outreach, the NSC project is aimed expressly at goals associated with the second priority: to improve retention and achievement rates to reduce time to completion.

Programming is designed for TAA-impacted, unemployed, and underemployed workers. The STEM credentials average 30 credit hours, and all completers receive an industry-validated college certificate.

The NSC is implementing two innovative and evidence-based strategies to serve the target population: (1) design new curricula within “built-for-completion” STEM pathways that integrate whole program design with cohort enrollment, block scheduling, compressed classroom time with hybrid delivery, embedded student support, and employer linkages; and (2) create an accelerated STEM bridge designed to bypass traditional developmental education by contextualizing remediation within the programs, quickly building the math, reading/writing, computer skills, and critical thinking skills of underprepared students. All curricula will be developed as an Open Educational Resource (OER) by the end of the grant period.

1. Design new curricula

Curriculum design is accomplished in two phases: content development and conversion to OER.

Content development: The analysis of labor markets and employer need was accomplished prior to the grant. Five technical teams were established, comprised of the subset of NSC colleges that would contribute to specific curriculum development based on their labor markets. The teams identified curriculum needs based on analyses of required workplace skills and corresponding learning outcomes and developed a common core curriculum and materials that can be customized for local/regional employers and colleges. To the extent possible, courses were developed in one-credit, 15-hour modules to increase portability. Embedded within the curricula are treatments intended to increase student success and reduce the time to completion: block scheduling, enabling students to take courses in a concentrated

National STEM Colleges
Anne Arundel Community College (MD) (lead college)
Clover Park Technical College (WA)
College of Lake County (IL)
Cuyahoga Community College (OH)
Florida State College at Jacksonville
Ivy Tech Community Colleges at Lafayette, North Central, Northeast, and Northwest (IN)
Macomb Community College (MI)
NorthWest Arkansas Community College
Roane State Community College (TN)
South Seattle Community College (WA)
time period each day to allow for employment and other responsibilities; cohort enrollment, where NSC participants take all courses as a group so that classmates support and motivate each other; and embedded student supports, to help students navigate college and workforce processes and mitigate problems that impede success.

Conversion to OER: A Learning Outcomes Assessment Specialist guides this activity and ensures that the courses and their components map to the intended learning outcomes. Classroom materials follow standard templates for consistency of format. Curriculum designers review and augment all materials to ensure they are complete. Subject matter experts from industry review all materials and content to confirm that the curricula provide the knowledge, skills, and abilities required in the workplace. An instructional design firm will convert all of the approved materials to an OER on Platform+, and this conversion will be completed by September 2014.

2. Create an accelerated STEM Bridge

The STEM Bridge consists of a 45-hour, online STEM Readiness course and a FAST TRACKS curriculum that are designed to help students bypass traditional developmental education. Because the STEM bridge curriculum is developed as an OER in modular format, the content is adaptable and adoptable for use by other disciplines.

STEM Readiness: All students entering the credit certificate programs directly will be co-enrolled in the STEM Readiness course designed to quickly refresh “rusty” skills in Math, Critical Thinking and Workplace Communication, and Professional Skills. The STEM Readiness course, designed around a common set of learning outcomes, was co-developed by a team of educators from the NSC, Carnegie Mellon University’s Open Learning Initiative (CMU/OLI), the Center for Applied Special Technologies (CAST), and employers from the NSC Employer Advisory Board. The faculty designed a Math placement test for the Math module so that students refresh only the skills they specifically need. Each module is built around a realistic STEM scenario. Students refresh their skills by completing “learn by doing” activities. Embedded learner analytics allow instructors to improve classroom effectiveness in real time.

FAST TRACKS: The FAST TRACKS program consists of curriculum “bundles” based on a master set of learning outcomes for Math, English, and life skills for learners at lower skill levels. The learning outcomes were identified by a team of NSC educators, and the curriculum is envisioned as a resource that may be used in whole or in part to provide resources at the lesson, bundle, or program level. For example, at Anne Arundel Community College, the curriculum was bundled into a full-day, intensive nine-week pilot program to provide a summer “boot camp” to quickly build key skills in time for fall enrollment in credit certificate programs.

The curricula for the certificate programs are completed, and most colleges launched their NSC programs in January 2013. The STEM Readiness course has launched in segments; the third and final unit will be launched in August 2013. Because these year-long programs launched at most NSC colleges in January 2013, outcome data are limited. As of June 30, 2013, NSC officials reported that in two of the NSC colleges that have program completers, the completion rate exceeded the grant goal of 80%. Those students also earned the NSC certificate. Though limited, the data indicate that the programs are having a positive effect on persistence and completion rates.

NSC’s third party evaluator is conducting a quantitative and qualitative analysis of the project. As more outcome data become available, it will be analyzed to determine the effectiveness of the NSC treatments and will inform future NSC project and scaling activities.

“We’re dealing with highly technical areas that change often, so sustainability is a concern for us. Constantly focusing throughout the development process that [the curriculum we developed] needed to be OER was one of the fundamental ways we were able to get there. Our member colleges were ready, willing, and able to meet that challenge.”

Kelly Koermer, Executive Director for the Center for Cyber and Homeland Security Technology and Joint Ventures, Anne Arundel Community College
Most of the innovative elements of the NSC project hold promise for scaling and sustainability. The scaling target, however, is OER. The five new certificate programs in emerging or growing industries, incorporating cohort enrollment, block scheduling, compressed classroom time with hybrid delivery, embedded student support, and employer linkages, will be scaled as OER. The STEM Readiness course is already an OER.

National STEM is working with the following partners to accomplish its goals of sustaining and scaling innovations:
- Complete College America/FutureWorks;
- Learning Network;
- Carnegie Mellon University Open Learning Initiative;
- Center for Applied Special Technologies;
- Community College Transformative Change Initiative;
- Local Workforce Agencies
- ARINC (Local defense contractor);
- Wal-Mart (Scaling team employer); and
- Local and national employer advisory boards.

Two key strategies will be employed to sustain and scale the NSC products:

1. Development of all NSC curricula including STEM Bridge as OER: As OER, it is will be available not only to the NSC programs, but to all colleges, and to employers to use for corporate training. The full continuum of program implementation activities will assist colleges in launching these programs from the ground up.

2. Widescale outreach in academic and workforce development arenas to promote the use of OER in general, the NSC programs in particular, and the collaborative program development approach for future programs. Outreach strategies include maintenance of the NSC website (www.NationalSTEM.org), active participation in open learning activities, providing presentations at academic and workforce conferences to promote the NSC innovations, and hosting events to invite non-NSC colleges to learn about the NSC products and processes.

The conversion of NSC pathways to OER is the key to NSC scaling and sustainability and is budgeted in the project. The partnership with CAST and CMU/OU has been instrumental in scaling the STEM Readiness course. Grant funds may support targeted events such as a symposium in year three that will be an opportunity for other colleges that could adopt the curricula to learn about the programs. Participating in events such as the League for Innovation Learning Lab, will build connections with colleges that can adopt the programs. Also, NSC is exploring additional funding opportunities to support scaling and sustainability.

The ability of the partner colleges to demonstrate agility in meeting students’ and labor market needs via rigorous, transportable, accelerated, and flexible certificates makes this effort a transformative addition to STEM education and the TAACCCT initiative.
For more information about National STEM, contact:
Susan Gallagher
Project Director
Anne Arundel Community College
410-777-2124
Sgallagher5@aacc.edu
Appendix A. CCTCI: Round One TAACCCT Consortia Members

The eight Round One TAACCCT consortia and member community colleges (lead colleges listed first) are:

- **Arkansas: Path to Accelerated Completion and Employment (PACE)** — NorthWest Arkansas Community College; Arkansas Northeastern College; Arkansas State University at Beebe, Mountain Home, & Newport; Black River Technical College; College of the Ouachitas; Cassatot Community College of the University of Arkansas; East Arkansas Community College; Mid-South Community College; National Park Community College; North Arkansas College; Ozarka College; Phillips Community College of the University of Arkansas; Pulaski Technical College; Rich Mountain Community College; South Arkansas Community College; Southeast Arkansas Community College; Southern Arkansas University Tech; and the University of Arkansas Community Colleges at Batesville, Hope, & Morrilton

- **California: Central California Community Colleges Committed to Change (C6)** — West Hills College, LeMoore; Bakersfield College; Cerritos Coso Community College; College of the Sequoias; Fresno City College; Merced College; Porterville College; Reedley College; San Joaquin Delta College; and West Hills College, Coalinga

- **Colorado: Colorado Online Energy Training Consortium (COETC)** — Community College of Denver; Aims Community College; Arapahoe Community College; Colorado Mountain College; Colorado Northwestern Community College; Community College of Aurora; Front Range Community College; Lamar Community College; Morgan Community College; Northeastern Junior College; Otero Junior College; Pikes Peak Community College; Pueblo Community College; Red Rocks Community College; and Trinidad State Junior College

- **Massachusetts: Massachusetts Community College Workforce Development Transformation Agenda (MCCWDTA)** — Quinsigamond Community College; Berkshire Community College; Bristol Community College; Bunker Hill Community College; Cape Cod Community College; Greenfield Community College; Holyoke Community College; Massachusetts Bay Community College; Massachusetts Community College; Middlesex Community College; Mt. Wachusett Community College; North Shore Community College; Northern Essex Community College; Roxbury Community College; and Springfield Technical Community College

- **Missouri: MoHealthWINs** — Ozarks Technical Community College; Crowder College; East Central College; Jefferson College; Linn State Technical College; Metropolitan Community College; Mineral Area College; Moberly Area College; North Central Missouri College; St. Charles Community College; St. Louis Community College; State Fair Community College; and Three Rivers Community College

- **Oregon: Credentials, Acceleration, and Support for Employment (CASE)** — Clackamas Community College; Blue Mountain Community College; Central Oregon Community College; Chemeketa Community College; Clatsop Community College; Columbia Gorge Community College; Klamath Community College; Lane Community College; Linn-Benton Community College; Mt. Hood Community College; Oregon Coast Community College; Portland Community College; Rogue Community College; Southwest Oregon Community College; Tillamook Bay Community College; Treasure Valley Community College; and Umpqua Community College

- **National: Health Professions Pathways (H2P)** — Cincinnati State Technical & Community College (OH); Anoka-Ramsey Community College (MN), Ashland Community & Technical College (KY); El Centro College (TX); Jefferson Community & Technical College (KY); Malcolm X College (one of the City Colleges of Chicago) (IL); Owens Community College (OH); Pine Technical College (MN); and Texarkana College (TX)
• **National: National STEM** — Anne Arundel Community College (MD); Clover Park Technical College (WA); College of Lake County (IL); Cuyahoga Community College (OH); Florida State College at Jacksonville (FL); Ivy Tech Community Colleges at Lafayette, North Central, Northeast, & Northwest (IN); Macomb Community College (MI); NorthWest Arkansas Community College (AR); Roane State Community College (TN); and South Seattle Community College (WA)
Appendix B. CCTCI: Map of Consortia Members

In the map below, the dots represent CCTCI-affiliated colleges from Round One and Round Two, including the 19 lead colleges, which are designated with a star.
This table lists the eight Round One consortia along with their key strategies and “big idea” for scaling.

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| **Arkansas - Path to Accelerated Completion and Employment (PACE)** | • Transform developmental education  
• Streamline career-technical education (CTE) programs  
• Implement intrusive advising and career services | • Developmental education reform, including scaling a uniform approach to preparing students to take the college assessment exam through a comprehensive orientation and modular, refresher curriculum |
| **California - Central California Community Colleges Committed to Change (C6)** | • Integrated program design  
• Cohort enrollment  
• Block scheduling  
• Compressed classroom instruction, including asynchronous instruction  
• Embedded remediation  
• Transparency, accountability, and labor market relevance  
• Transformative technology - blended learning models, open textbooks  
• Innovative student support | • Redesigned and restructured curriculum to include embedded remediation, asynchronous instruction and Open Education Resources (OER) |
| **Colorado - Colorado Online Energy Training Consortium (COETC)** | • Redesign developmental education using evidence-based practices in modular, contextualized, and accelerated curriculum and alternative assessments  
• Flexible, stackable credentials that lead through career pathways, through the development of online and hybrid certificate and degree programs  
• Wrap-around, intrusive student support services, including career advising | • Hybrid, on-line career-technical education (CTE) programs in energy-related fields  
• Developmental education to allow students to accelerate into college-level coursework |
| **Massachusetts - Massachusetts Community College Workforce Development Transformation Agenda (MCCWDTA)** | • Navigators, career coaches, and achievement coaches  
• Redesign developmental education  
• Reshape certificate and degree programs  
• Utilize technology | • Shared mechanisms and practices to assist students with career planning, coaching, and placement, including developing efficient, technology-enabled services and direct support among colleges and One Stop Career Centers |
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This table lists the eight Round One consortia along with their key strategies and “big idea” for scaling.

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