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Introduction

Started in 2012, the Transformative Change Initiative (TCI) is dedicated to assisting community colleges to scale-up innovation in the form of guided pathways, programs of study, and evidence-based strategies to improve student outcomes and program, organization, and system performance.

Transformative change refers to implementing, sustaining, and scaling change that produces unprecedented results without sacrificing the historic commitment of community colleges to access, opportunity, and equitable outcomes.

Community colleges that engage in TCI are committed to innovations that are as effective for underserved learners as they are for student groups that have traditionally enrolled in college. Pushing performance to new levels is not just an axiom for TCI, it is TCI's fundamental mission.

Through the leadership of experienced practitioners and the support of researchers and experts affiliated with the Office of Community College Research and Leadership (OCCRL) and The Collaboratory, TCI assists community colleges throughout the nation to improve postsecondary education and employment outcomes. TCI reaches out to community colleges through the TCI Network, professional development, applied research, and other technical support to facilitate engagement in innovation and transformative change.
Scaling Transformative Change

Strategic implementation of guided pathways, programs of study, and evidence-based strategies is a critical goal of TCI. How can this be done? Jeanne Century, a leading researcher on scaling innovation in Science, Technology, Engineering, and Mathematics (STEM) education, claims two critical dimensions of scaling are spread and endurance.¹

Envisioning how innovation will spread and how it will endure is key to successful scaling in any context, and especially important in the education context.

Spread refers to determining whether scaling will be done within an organization or with other organizations. In other words, it refers to the how wide the innovation will reach. Is scaling focused on impacting the organization that originates the innovation, or is it intended to impact multiple organizations (e.g., other community colleges, K-12 education, universities, workforce agencies, employers, community-based organizations, and others)? Setting clear targets to guide the spread of an innovation is necessary to obtain intended results.

Endurance is about how long an innovation will last and what processes are needed to ensure its proposed longevity. A commitment to change over time has to be deliberate and sustained. Realistic timelines help implement and institutionalize change. According to Century, most innovations acclimate to the local context over time. Adaptation and acclimation are required for long-term endurance.²

Those who are engaged in scaling innovation should keep track of a fundamental goal of scaling, which is to grow impact.³ Kathleen Enright, the President and CEO of Grantmakers for Effective Organizations, claims scaling isn’t just about changing or doing things better, it’s about changing and doing better things to produce greater impact. In the educational context, greater impact is about improving outcomes, increasing social impact, and contributing to the public good.

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Window of Opportunity

The impetus for TCI is the Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant program. Beginning in 2011, the United States Department of Labor (DOL) began awarding a total of nearly $500 million per year to single institutions or consortia of colleges throughout the United States that implement guided pathways, programs of study, and evidence-based strategies that are intended to improve postsecondary education and workforce performance. Through highly competitive 3- or 4-year grants, community colleges are required to recruit and assist Trade Adjustment Act (TAA)-eligible workers and other adults to participate in “undergraduate education and career training program strategies or to replicate existing designs, program development methods, and/or delivery strategies that have established evidence of successful implementation.”

According to the DOL, TAACCCT aims to “ensure that our nation’s higher education institutions are able to help TAA-eligible workers and other adults acquire the skills, degrees, and credentials needed for high-wage, high-skill employment while also meeting the needs of employers for skilled workers.”

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Guided Pathways, Programs of Study, and Evidence-Based Strategies

The TAACCCT grants provide funds to support guided pathways, programs of study, and evidence-based strategies designed to improve student, program, and system performance. The pathways and programs of study are linked to careers in a wide range of occupations that are experiencing growth in the US economy, including STEM, health care, information technology, business, and other fields.

Evidence-based strategies include accelerated and contextualized developmental education; competency-based curriculum; online and open learning technologies; intensive student supports; industry-recognized stackable credentials; and career development and job placement, to name a few. Ultimately, TAACCCT attempts to support community colleges in building capacity and improving performance by serving as a test-bed for scaling innovations on a level never before seen in the US.

Innovate without sacrificing the historic commitment to access, opportunity, and equitable outcomes.
Transformative Change Initiative Framework

The TCI Framework presents the rationale and guiding principles for scaling innovation in the community college context. It is important to link scaling to guiding principles because principles provide direction rather than prescription. They represent the intentionality of the innovation in ways that often allow for multiple actions (practices) to take place. Principles provide “guidance for action in the face of complexity” so that adaptation can occur in ways that achieve the intended outcome.

The theory of change for TCI suggests scaling happens most successfully when practitioners apply guiding principles to their implementation and scaling efforts. In this view, scaling is not so much about replicating what others assert is good practice, which is a classic theory of scaling, but about practitioners and stakeholders becoming instrumental to the scaling process by igniting a chain of actions, reactions, and outcomes that reflect and ultimately reshape the context. To make this happen, practitioners need to:

• be aware of the principles that guide the changes they are making to their practice,
• reflect those principles in implementation over time, and
• measure and assess whether the changes are producing the intended improved performance.

The following themes are reflected in the guiding principles of the TCI Framework:

<table>
<thead>
<tr>
<th></th>
<th>Theme</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Leadership, organization, and support</td>
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<td>Networks and professional development</td>
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<td>Policy-focused and publicly financed reform</td>
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<td>5</td>
<td>Technology support and technical assistance</td>
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<td>6</td>
<td>Targeted sharing and dissemination</td>
</tr>
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<td>7</td>
<td>Evaluation utilization to grow impact</td>
</tr>
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</table>
Leadership, Organization, and Support

Leaders who engage in transformative change come from many backgrounds and represent many perspectives. Top-down leadership associated with formal administrative roles is important to transformative change, but so is bottom-up leadership. In the context of transformative change, leadership is less about formal structure than persistent persuasion. Ultimately, leadership to scale innovation is less focused on lines of authority than on the ideas and actions that individuals put forth to generate new understandings of, enthusiasm for, and commitment to change.

Shared leadership, also called distributed leadership,\(^7\) is an important way of thinking about the kind of leadership that is needed to implement and scale change. Improving pathways, programs, and practices in the context of the community college “...requires the active engagement of multiple stakeholders who act collectively to create and implement a shared vision, to execute short- and long-term goals and plans, and to engage actively in strategic implementation...”\(^8\)

| GUIDING PRINCIPLE | Leadership, organization, and support are essential to implementing, sustaining, and scaling transformative change. |

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Transformative Leadership

The notion of transformative leadership suggests leaders are agents of change who are acutely aware of diverse learners’ aspirations to access education, to participate fully and successfully in learning, and to achieve desired outcomes. Transformative leaders are advocates for access, equity, and opportunity for underserved students, including students who have not acquired access to higher education in the past. Transformative leaders are committed to systematic change, and they assume heightened responsibilities for the dual goals of enhancing equity and improving student outcomes.

Ensuring organizational support, including adequate fiscal resources, is important to incentivizing and sustaining the people who engage in innovation. Individuals who resonate with “big-picture thinking” as well as those who prefer a “deep dive” into implementation are needed. Democratic processes of coordination and collaboration are needed to address complexity and bring about change in any organizational context, including community colleges.

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Adoption and Adaptation

The classic idea for scaling innovation calls for replication with fidelity, meaning implementation consistent with an original innovation.\textsuperscript{10} In complex organizations such as community colleges where context varies greatly from one college to another, leaders need to pay close attention to the local context to sustain and scale an innovation. Lisbeth Schorr, a leader in scaling in family and community settings, concurs that for innovations to last, they must strategically adapt to the locations where they are implemented.\textsuperscript{11} In her experience, a more promising approach than replication involves practitioners recognizing how the local context influences implementation; using data to understand what is working (and what is not); and repeating the pattern of implementing, measuring, learning, and adapting over time. Her thoughts echo those of John Kotter, the leading organizational change expert who keynoted the 2013 Learning Lab on Transformative Change.\textsuperscript{12} According to Kotter, establishing a sense of urgency for change, communicating a vision for change, and integrating change into the local cultural context is important to organizational adaptation and improvement.

GUIDING PRINCIPLE

Adoption and adaptation are key to implementing, sustaining, and scaling innovation.


\textsuperscript{12} For more on John Kotter’s work, see http://www.kotterinternational.com/our-principles/changesteps
Networks and Professional Development

When community colleges engage in TAACCCT and other similar initiatives, they become part of a larger network of community colleges across the US that have similar goals and intended outcomes. Consortia created through TAACCCT bring together community colleges in networks that connect to other colleges and to employers to address workforce, economic, and social concerns. To do this, community colleges draw upon local, state, and national expertise to share resources, and they partner with workforce agencies, employers, universities, community-based organizations, and others to address important needs.

Sharing information about how educational systems, training providers, and labor markets work and how they are linked to the local, state, national, and global economies is important. Working in conjunction with other committed providers, community colleges can prepare learners to navigate guided pathways through postsecondary education and into the workforce by paying close attention to learners who experience challenges completing their educational and career goals.

**GUIDING PRINCIPLE**

3

Through networks and professional development, community colleges gain access to expertise and resources that are vital to scaling innovation.
Communi...
Transformative C... Round 1 and 2 TA...
Figure 1. Founding TCI Network, with 19 consortia and 231 community college members
Policy-Focused and Publicly Financed Reform

Most community colleges are publicly financed and therefore influenced by political and fiscal environments. They are both empowered and constrained by their public environments, which suggests any effort at scaling needs to take public and political contexts into account.

Scaling in the public sector occurs at the local, state, and federal levels and sometimes occurs at multiple levels simultaneously. Asera, McDonnell, and Soricone suggest states that have successfully scaled up career pathway reforms have approached their efforts in a sequential fashion, from planning and moving to initiating, expanding, and ultimately sustaining. They refer to this process as the “arc of scaling” to reflect the trajectory from planning to sustaining. This best-case scenario works well when goals are clear, plans are carefully executed, and lessons are documented and disseminated.

However, this is often not the case due to limited opportunity to inform decisions with meaningful evidence as implementation unfolds. Often, practitioners struggle to find time to communicate and disseminate what they have learned, and this is unfortunate. TCI aims to find ways to assist practitioners to share their stories about how transformative change is happening in the community college context.

<table>
<thead>
<tr>
<th>GUIDING PRINCIPLE</th>
<th>Scaling is enhanced when practitioners tell their stories of how change improves the community college policy context.</th>
</tr>
</thead>
</table>

Technology Support and Technical Assistance

Technology has become a critical element of innovation, and it has also become a very critical element in sustaining and scaling innovation. For example, technology applications for learning through online and open education resources are center stage today, as are technology applications to achieve greater efficiencies in delivery, administration, and assessment. Equally important is the application of technology to improve implementation, sustainability, and scaling. For example, social network mapping can be used to visually represent relationships among innovators and users to give insight into how innovations grow and change over time. They can illustrate weak and strong connections between user groups that indicate where additional resources are needed to encourage scaling.\(^{14}\)

Practices are more likely to be implemented and improved when technical assistance is provided by experts who understand how innovations can work and how to adapt them in the local context.

Finding expertise of this sort can be challenging, but the value of effective technical assistance cannot be overstated in the context of transformative change.

GUIDING PRINCIPLE

Technology applications and technical assistance are instrumental to adaptation and scaling of transformative change.

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Targeted Sharing and Dissemination

Dissemination begins by assessing the ways potential user groups, sometimes referred to as stakeholders, implement an innovation and tailor it to promote scale-up in other contexts. Bradley and others who researched scaling in international contexts recommend: “[T]ailoring of the innovation to fit target user groups; development of political, regulatory, socio-cultural, and economic support for the use of the innovation in target user groups; deep engagement with target user groups to ensure that the innovation is translated, integrated, and replicated effectively; and devolving of efforts to spread the innovation from the initial user groups to additional sets of user groups often through social and professional networks and relationships.”¹⁵

The ultimate goal of dissemination is to not only share the features of the innovation but also to help potential users understand how implementation was done in the original context so that the target users can understand how to adapt and adopt the innovation in the new organization.

GUIDING PRINCIPLE

Identifying and engaging user groups in dissemination that is sensitive to context is important to scaling transformative change.

The 2013 Evaluation Collaborative meeting in Chicago, IL.

Evaluation Utilization to Grow Impact

Using multiple forms of research and evaluation is important to scaling innovation. Comprehensive approaches to evaluation are also especially important when capacity building is undertaken, such as with TAACCCT. With respect to TAACCCT, comprehensive evaluation designs include performance evaluation wherein data are gathered to track and report on myriad education and employment indicators. Evaluations associated with TAACCCT also focus on program implementation, especially in conjunction with guided pathways, programs of study, and evidence-based strategies. Understanding what and how principles guide practice is critical to designing program evaluations that can be utilized by stakeholders. Sophisticated designs, including quasi-experiments or experiments, may also be valuable to assessing impact if circumstances allow for credible use of these designs. However, “rigorous” evaluation designs have limited utility if the data that are gathered lack validity, reliability, and utility.

The potential for using mixed methods to measure the adaptation of innovations in different contexts may be the most important development relative to the evaluation. Applied research and evaluation activities that engage practitioners in reflection and story-telling about their experiences may be helpful as well.

Schorr contends that communications about scaling innovation are critical to informing other practitioners on implementation and spread, on continuous improvement opportunities, and on performance and impact.\textsuperscript{16}

\begin{table}[h]
\centering
\begin{tabular}{|c|p{\textwidth}|}
\hline
GUIDING PRINCIPLE & Integrating implementation and evaluation enhances learning for the purposes of scaling innovations and growing impact. \\
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\end{tabular}
\caption{Guiding Principle 7}
\end{table}

Developmental Evaluation

An approach to evaluation that seems especially fruitful for evaluating the scaling of innovations is developmental evaluation.\textsuperscript{17} Patton writes that developmental evaluation is “informed by systems thinking and sensitive to complex nonlinear dynamics.” He reports that it involves “asking evaluative questions, applying evaluation logic, and gathering real-time data to inform ongoing decision making and adaptations.” Often the evaluator becomes part of the team “to infuse team discussions with evaluative questions, thinking, and data, and to facilitate systemic data-based reflection and decision making in the developmental process.”

Finally, in the context of TAACCCT and similar initiatives, evaluation should not focus so exclusively on external reporting that the potential to use evaluation to learn, to innovate, and to grow impact is lost. Balancing the complexity of implementation and evaluation is very difficult, but practitioners who find a way to integrate rather than separate evaluation from implementation seem to be the ones who build the most productive environment for innovation.

Scaling Innovations

TCI consortia are implementing and scaling innovations designed to improve outcomes for diverse learners. Each consortium in the TCI Network selects an innovation or a small set of linked innovations that it believes has the potential to improve student outcomes and ultimately, program, organization, and system performance.

Colleges adapt innovations to fit local needs while also committing to achieve the outcomes shared by partner colleges in their consortium. This flexible approach is critical to transformative change as it takes into account diverse local contexts shaped by geography, demographics, and nuanced needs inherent in implementing guided pathways, programs of study, and evidence-based reforms.

The scaling targets for the Round One consortia follows.

<table>
<thead>
<tr>
<th>Round One Consortium Name and Location</th>
<th>Scaling Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Path to Accelerated Completion and Employment (Arkansas)</td>
<td>Test Prep: comprehensive orientation prior to taking COMPASS and a modular, refresher curriculum for students retaking the exam</td>
</tr>
<tr>
<td>Central California Colleges Committed to Change (Regional Consortium in California)</td>
<td>Open Educational Resources (OER): instructional materials, textbooks, and curricula in three industry sectors</td>
</tr>
<tr>
<td>Online Energy Training Consortium (Colorado)</td>
<td>Redesigned developmental education to accelerate progression to college-level coursework</td>
</tr>
<tr>
<td>Massachusetts Community College Workforce Development Transformation Agenda</td>
<td>Shared mechanisms among colleges, One-Stop Centers and WIBs for students’/clients’ career planning, coaching, and job placement</td>
</tr>
<tr>
<td>MoHealthWINs (Missouri)</td>
<td>Contextualized development education and intrusive student support services</td>
</tr>
<tr>
<td>Credentials, Acceleration, and Support for Employment (Oregon)</td>
<td>Career coaches, part of an intentional and visible menu of best practices in student support services</td>
</tr>
<tr>
<td>Health Professions Pathways (multi-state)</td>
<td>Core curriculum for health professions education</td>
</tr>
<tr>
<td>National STEM</td>
<td>Open Educational Resources (OER) in five technical STEM areas</td>
</tr>
</tbody>
</table>
TCI Network

The TCI Network was founded with eight Round One and eleven Round Two TAACCCT consortia with over 230 colleges (see Figure 1). The Network includes founding consortia with partner community colleges and other organizations from a single state or across multiple states. Some consortia focus on a single career cluster or pathway and others focus on a range of clusters and pathways tied to different workforce needs. Some consortia attempt to create new programs of study, and others focus on reforming and refining existing ones. Priorities also vary as to the focus on strategies, with some consortia that focus almost exclusively on strategies to support heightened student success (e.g., assessment, advising, retention, placement) while others focus on curriculum and instruction reform.

All Round Three and Round Four consortium grantees are invited to the TCI learning events and to join the TCI Network. Similarly, information to support transformative change is shared with TAACCCT consortia from Rounds One and Two. These consortia will have the opportunity to join the TCI Network, to attend future Learning Lab convenings, to participate in webinars and communities of practice, and to use tools and templates designed to promote the scaling of innovations and impact.

Heather McKay, evaluator for the Colorado Online Energy Training Consortium (COETC), leads a group during the 2013 Evaluation Collaborative in Chicago, IL.
Learning Lab Philosophy

TCI operates as a “Learning Lab” wherein practitioners, policy makers, researchers, social entrepreneurs, and others work collaboratively to reflect, investigate, engage, and conceptualize how transformative change is implemented and scaled within and across organizations. Acting as a national platform to share resources and build connections, TCI focuses on shared learning to bring about transformative change at the program of study, organizational, consortium, and industry levels. The shared learning associated with TCI is also critical to policy change at the state and federal levels.

The Learning Lab philosophy engages diverse stakeholders and thought leaders in working within and across consortia to accelerate transformative change associated with programs, practices, and state policies.

This philosophy emphasizes the need to address the concerns of underserved populations such as adult workers, TAA-eligible and dislocated workers, veteran and military engagement personnel, and others.

Using a variety of communication methods, consortium-level teams are better prepared to draft a transformative change plan that helps guide the implementation of innovations that are scaled within individual colleges, across the consortium colleges, and eventually to any college wishing to adopt TAACCCT strategies designed to improve student outcomes.
TCI Premier Events

Learning Lab Convening: TCI’s premier event is the Learning Lab Convening, which focuses on enabling community college practitioners and their partners to explore the ways innovation can be scaled to create transformative change. At the events in February 2013 and 2014, the consortia identified scaling opportunities, contributors to scaling success, scaling partners, and resources.

Scaling Forum: In June 2013, the 19 TCI consortia met for a full day of further learning about the theory and practice of scaling innovation. Participants heard Round One consortium leaders present their scaling plans and initial progress, and they joined Round Two consortium leaders in roundtable discussions on strategic leadership, state and national policy, and the use of evidence to grow impact.

Webinars and Conference Calls: TCI continually engages consortia members though conference calls and webinars to convey important themes about scaling innovation. Example topics include:

- Scaling developmental education reform efforts;
- Developing a scaling strategy;
- Adaptive learning solutions for student success;
- Scaling transformative change;
- Creating transformative partnerships
- Aligning TAACCCT employer partner contributions for transformative change;
- Workforce system partners learning community; and
- Employer engagement.

Barbara Illowsky, Linda Villanueva, Dale Allen, Dianne Lee, Janet Paulovich, and Mike Leach present at the 2013 Scaling Forum in Chicago, IL.
Communities of Practice

Communities of Practice support the scaling model by growing human capacity to scale, creating robust networks and partnerships, and facilitating learning and supports. The goals of the TCI Communities of Practice are to:

- Gain critical insights and exchange ideas on promising practices and innovations;
- Use grantees’ diverse knowledge and skills as resources to collectively find solutions to challenges;
- Access best-in-class experts to deepen knowledge and expertise on specific transformative change strategies;
- Build the capacity of grantees to implement, expand, and improve practices and programs of study through collaborative dialogue; and
- Create a shared agenda that contributes to the collective knowledge and wisdom of the field.

Members of the Communities of Practice determine the agenda and meet through conference calls, a collaborative workspace, and webinars. The communities serve as a powerful and interactive tool to support consortia and focus on strategies such as advanced technology solutions, prior learning assessment, competency-based education, and developmental education.

Through the Communities of Practice, the TCI Network cultivates partnerships between education, employers, and workforce and community providers.

Participants at the 2013 Scaling Forum in Chicago, IL.
Evaluation Collaborative

Third-party evaluators for consortia associated with the TCI Network participate in a new group called the TCI Evaluation Collaborative, which held its first meeting in December 2013. This meeting included time for sharing evaluation questions and methods, strategies to support data utilization and continuous improvement, efforts to overcome barriers and challenges to conducting and using evaluation data, and opportunities to collaborate.

The Evaluation Collaborative provides a venue for third-party evaluators to share and learn from one another about meaningful ways to gather, analyze, and report data, including data measuring performance and impact. The group also plans to develop measures on scaling innovation that are disseminated widely and encourage methods that support continuous improvement.

As TCI consortia select the transformative practices they intend to scale, documentation and descriptions are added to the TCI website at http://occrl.illinois.edu/projects/transformative_change/.
Research on Scaling Transformative Change

 Scaling reform in higher education has a history of being difficult, painstaking, and often protracted.\(^{18}\) The insights gained from scaling models used in K-12 education and other disciplines have not translated well to the higher education context.\(^{19}\) There is much to be learned about the process of scaling large innovations in higher education and specifically, in community colleges.

TCI research focuses on the processes of expanding or scaling the reforms developed in the TAACCCT grant to other programs, other organizations, and other states to achieve transformative change.

Drawing on theories of social innovation interwoven with lessons learned in practice, TCI research uncovers the guiding principles and promising practices for scaling innovation in the community college context. Insights from this research are applicable to future rounds of TAACCCT grants as well as to future federal and other large-scale, policy-driven initiatives. In addition, TCI researchers gather data on how local contexts operate in conjunction with state systems to enable or inhibit the potential for scaling innovation and growing impact, which lends new insights into the role of state policy in scaling innovation.


\(^{19}\) Coburn, C. (2003). Rethinking scale: Moving beyond numbers to deep and lasting change. Educational Researcher, 32, 3-23. doi:10.3102/0013189X032006003