

Case-Informed Lessons for Scaling Innovation at Community and Technical Colleges

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Learning how to scale innovative practices to serve most students more effectively is the major challenge facing institutions of higher education. The Catalyst Fund colleges provided a setting to examine diverse institutions wanting to scale various practices, more deeply within their campuses and more broadly to other colleges. We hope this evaluation report offers useful information for stakeholders committed to institutional and systems reform.

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Introduction

This evaluation report of Achieving the Dream's Catalyst Fund builds on the emergent research on scale, and its reconceptualization from replication to transformation. The literature suggests that achieving scale requires colleges to identify levers for institutional transformation that can create conditions for altering organizational structures and norms of behavior and interaction. Informed by our decade-long work evaluating implementation and scale nationally, we have identified these levers as "transformative ingredients" that can enable college stakeholders to redefine the idea of scale as a process of change to alter the beliefs and norms of social interaction among college leaders. Our evaluation of the Catalyst Fund provided a case-informed opportunity to examine these "transformative ingredients" at four colleges that committed to scaling a targeted, innovative practice to serve most students. In addition, we used the Catalyst Fund evaluation to identify nine factors for consideration by stakeholders seeking to scale an innovative practice from one college to many.

Our Report At-a-Glance

In **Section One** of this report, we provide a brief overview on the importance of scale in the context of a national movement to increase college completion, including a review of the most salient literature on sustainability and scale that informed our evaluation.

In **Section Two**, we describe the Catalyst Fund initiative to support four community colleges to scale an innovative practice to serve most of their students, followed by an overview of our evaluation approach.

In **Sections Three** and **Four**, we discuss our evaluation findings, and offer illustrative examples of the key factors that appear necessary to achieve scale.

Finally, we conclude the report with **recommendations** for colleges and other stakeholders that wish to scale innovation – and transform their organizational culture – in service of student success and the college completion agenda.

Section One: Why is Scale Important?

During the past decade, the national push to increase the proportion of adults with a high-quality postsecondary degree has become a widely promoted priority for many policymakers, business leaders, and philanthropic organizations, as well as for college and university leaders. The Lumina Foundation's big goal of 60 percent of adults having a postsecondary credential by 2025 is perhaps the most widely known manifestation of the completion agenda. The Bill and Melinda Gates Foundation's version of this goal is to double the numbers of young adults 16-24 years of age with a postsecondary credential. And, the White House has claimed a national imperative for the United States to once again lead the world in terms of Americans with education and training beyond high school, citing OECD data that show 12 countries now surpass the United States in the proportion of adults 25-34 years of age with a postsecondary credential (See *Kuczera and Field, 2013*). President Obama's recent call for free community college represents only the latest of many policy pronouncements from the White House in support of the college completion agenda.¹

In addition to college affordability and access, the completion agenda is driving demands for more accountability and cost-effectiveness by postsecondary institutions, perhaps most notably by increasing public and policy-making pressure on colleges to get more students to enroll in and finish college programs, and earn certificates and degrees, especially in high-demand occupational fields. Recent data from the National Student

Clearinghouse indicate that colleges and universities need to graduate many more students than are currently completing: the national cohort six-year college attainment rate was 55 percent in 2014, which means that almost half of students who enroll in

college do not complete (*Shapiro, Dundar, Yuan, Harrell & Wakhungu, 2014*). Data from the U.S. Census further illustrates the magnitude of the completion agenda, because only 36 percent of adults 25 years and older had a postsecondary credential in 2013²; and these percentages are even lower for African-Americans and Latinos, whose share of the overall population is growing.

The challenge for colleges to expand the number and proportion of students earning credentials does not appear to be a lack of knowledge about effective postsecondary practices.

The challenge for colleges to expand the number and proportion of students earning credentials does not appear to be a lack of knowledge about effective postsecondary practices. The Center for Community College Student Engagement recently published its third report in a series addressing 13 promising high-impact practices that can improve student outcomes. These practices include accelerated developmental education courses, a first-year experience seminar, a student success course, supplemental instruction, and structured group learning experiences (*CCCSE, 2014*). MDRC's experimental study of learning communities at Kingsborough Community College found higher completion rates among learning community participants – specifically a 4.6 percentage point increase in the proportion of students who earned a degree after six years (*Sommo, Mayer, Rudd, and Cullinan, 2012*). Another experimental study on the Accelerated Study in Associate Programs (ASAP) at the

¹ For a scholarly assessment of free community college, see Goldrick-Rab, S. and Kendall, N., 2014. *Redefining college affordability: Securing America's future with a free two-year college option*. Madison: The Education Optimists, April.

² U.S. Census, Educational Attainment 2009-2013. *American Community Survey 5 Year Estimates*. http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_13_5YR_S1501&prodType=table

City University of New York found positive impacts for participants in terms of persistence, credit accumulation, and graduation (*Scrivener and Weiss, 2013*). ASAP students enroll in blocked scheduled classes for at least 12 credits per term – typically with a developmental education course – and receive comprehensive advisement, meet with a career and employment specialist once a semester, and receive free public transportation and free textbooks, as well as a tuition waiver to cover any gap between their financial aid and their tuition and fees.

Many colleges already offer some variation of these high-impact practices, yet their credential attainment rates remain woefully inadequate to meet the ambitious goals of the college completion agenda. The primary culprit is that these high-impact practices are rarely scaled to serve most, if not all, students who could benefit. Indeed, highly effective boutique programs are commonplace among community colleges, including among colleges committed to institutional reform and the completion agenda. For

example, the initial evaluation report on the impact of Achieving the Dream found that, despite creating a “culture of evidence” and “instituting a wide range of strategies to improve student achievement,” the initial 27 colleges made

Put simply, the real challenge for the completion agenda is one of implementation and scale. An innovative high-impact practice can instigate a reform agenda, and implementation can be an effective way to organize stakeholders around institutional change.

little progress on overall completion rates, in part, because the reforms implemented reached less than 10 percent of the target population (*Zachry Rutschow et al, 2011*).

Put simply, the real challenge for the completion agenda is one of implementation and scale. An innovative high-impact practice can instigate a reform agenda, and implementation can be an effective way to organize stakeholders around institutional change. However, to “design with scale in mind” (see *Public Agenda, Cutting Edge Series No. 2*), colleges must deliberately seek to change how they operate, both organizationally and functionally. As Kezar (2011) puts it, scaling innovation requires that colleges create conditions for “internal communities of practice” to change their cultural norms and incentives – that is, to intentionally and strategically establish processes to alter the basic organizational structures of the institution. Similarly, Coburn (2003) describes scale as a process for creating depth, sustainability, and spread – that is, creating new conditions for decision-making and ownership of reform, including for the innovative practice to be scaled.

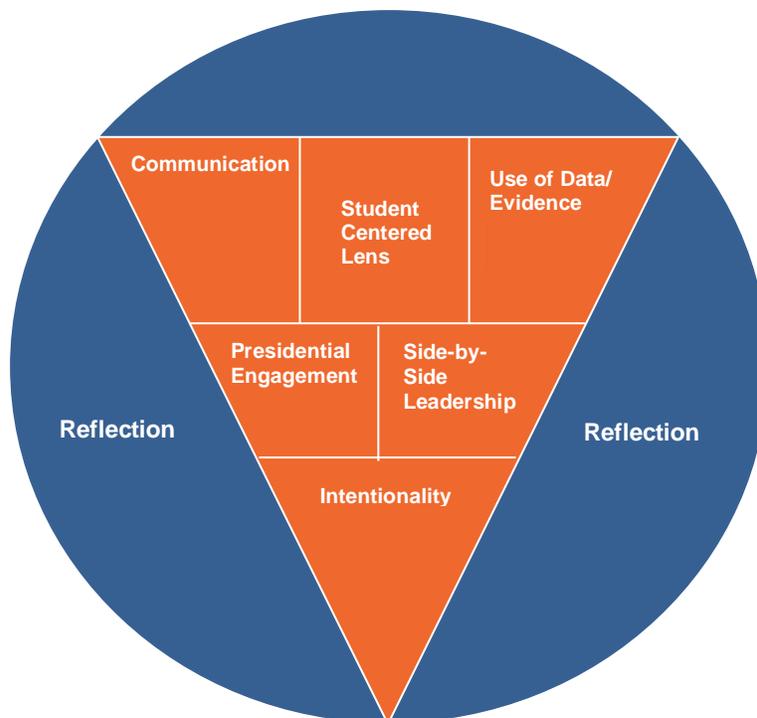
Another way to think about scale, then, is to reformulate the notion of scale from a focus on *replication of innovative practices* to a focus on *systems and culture change*. A recent Fund for the Improvement of Postsecondary Education report, *The Community College Jigsaw*, identified the transformative ingredients needed for colleges to change their organizational culture and achieve institutional redesign. Institutional redesign was defined as:

Deeper, more systemic change that extends beyond specific projects to encompass new ways of working campus wide, across and within divisions and departments, as well as up and down administrative hierarchies (*Price, Malnarich and Lardner, 2013, p.1*).

To achieve institutional redesign during the jigsaw project, colleges worked on a specific, targeted innovation among a network of peer institutions, and practiced new

ways of working together by addressing a core set of ingredients that created conditions for a breakthrough moment. As illustrated in Figure 1, the jigsaw project pointed to several core ingredients that colleges need to address in order to achieve culture change, and thus the potential for scale: side-by-side collaborative leadership, presidential engagement, being student-centered, regular mechanisms for ongoing reflection, inclusive communication, and the use of data (Price, Malnarich and Lardner, 2013). These ingredients balance on the “tip of intentionality,” indicating the importance of designing with scale and transformation in mind. This notion of scale is reinforced by findings from two recent initiatives. Completion by Design identified eight factors necessary for colleges to achieve systems change: flexible vision, senior leadership, distributed leadership, communication and engagement, incentives, professional development, visible actions, and resources (MDRC, 2014). Similarly, the Transformative Change Initiative identified seven guiding principles for scaling innovation in the community college context: shared leadership, adoption and adaptation, networks and professional development, policy-focused and publicly financed reform, technology support and technical assistance, targeted sharing and dissemination, and use of evaluation to grow impact (Office of Community College Research and Leadership and The Collaboratory, 2014).

Figure 1: Jigsaw Core Ingredients for Institutional Redesign



Price, Malnarich, Lardner and Schlessinger, 2013.

The research literature provides some explanation for why colleges are not scaling high-impact practices – namely, a misplaced idea of replication that implies an effective practice that has been institutionalized and sustained in one location can be inserted in another location with the same results. By focusing too much on replicating high-impact practices, colleges fall into a “scale-up trap” that diverts attention from the implementation setting in which the practice is to be scaled. Scaling requires college leaders and other stakeholders to focus beyond particular innovative practices, and address deeper, systemic policies and procedures that

touch all aspects of organizational behavior. In other words, if efforts to scale are focused on the practice itself, rather than the context in which these practices are operating, then scale is unlikely to be achieved.

Section Two: What is the Catalyst Fund?

Achieving the Dream’s (ATD) Catalyst Fund was created to demonstrate that scaling an effective practice is possible within diverse community college settings. The Catalyst Fund was supported by the Bill and Melinda Gates Foundation, and was grounded in MDC Inc.’s framework of scale, *More to Most* (Parcell, 2012). This framework lays out a strategy for colleges to build internal capacities that can enable programs or interventions to scale. Catalyst Fund colleges were provided two years of grant funding, and committed to continue their scaling effort for two additional years beyond the grant period. This evaluation report reflects lessons for scaling after the initial two years of the Catalyst Fund.

Four ATD leader colleges were selected as Catalyst Fund colleges:

- Brazosport College, Lake Johnson, TX
- Bunker Hill Community College, Boston, MA
- Durham Technical Community College, Durham, NC
- Patrick Henry Community College, Martinsville, VA

These institutions were “known for their commitment to student-centered evidence-based reforms and outstanding increases in student outcomes.”³ Each college had already implemented an innovative practice that served some or many students, and were committed to scaling their respective practices to serve *more or most* of the students within their institutions, or to expand their innovation to other institutions.⁴ As part of this effort, Achieving the Dream brought together these colleges as a peer-learning network to share their progress and challenges of scaling.

Prior to their selection to the Catalyst Fund, each college provided evidence of the targeted practice’s impact, including both quantitative and qualitative data that demonstrated the intervention had successfully raised student achievement in at least one of the five Achieving the Dream

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student achievement measures: course completion, advancement from developmental education to credit-bearing courses, completion of college level “gateway” math and English courses, term-to-term and year-to-year persistence, and completion of certificates or degrees. In addition to providing evidence on the effectiveness of their innovative practice, colleges had to document that the target population for the Catalyst Fund represented a significant portion of the total student

³ <http://achievingthedream.org/resources/initiatives/catalyst-fund>

⁴ In the Request for Proposals, Achieving the Dream defined serving “some” students as 25% or less of the targeted student population and “more” and “most” as 25.1% to 60% and greater than 60%, respectively.

enrollment at the institution, and why this target student population was integral to the overall student success agenda at the institution.

The Catalyst Fund's core hypothesis was that colleges with demonstrated progress to expand and institutionalize an innovative practice to serve many students could be "catalyzed" to achieve depth of scale and serve more or most students within their institution. The colleges also could be "catalyzed" to achieve breadth of scale by helping additional institutions implement and scale their innovative practice. These two aspects of scale were defined as *intra-institutional* and *inter-institutional* scale, respectively. *Intra-institutional scale* was about deepening the presence of an innovative practice within the college to reach most students in a specific target student population. *Inter-institutional scale* was about expanding the innovative practice to serve significantly more or most students in a specific target student population in other colleges.

The Catalyst Fund colleges represented a diverse set of institutions at which to document and learn about the process of scaling, and to further understand which levers of institutional transformation were necessary for colleges to achieve scale as defined by the initiative. Importantly, Catalyst colleges were not starting from scratch, but were building off several years of efforts to institutionalize and expand an innovative practice to improve student success.

Brief Overview of Our Evaluation

We designed the evaluation as a case-informed analysis to examine the process of intra-institutional scale and inter-institutional scale of the selected innovative practices across these four colleges. Catalyst Fund colleges were our laboratory in examining and understanding how scale happens in diverse higher education contexts. Our key evaluation question was:

How did the colleges pursue scale, and were these strategies effective in helping colleges achieve scale and serve more or most students?

Prior to addressing this question, the evaluation team analyzed data from the Achieving the Dream database that reflected entering fall student cohorts from 2008, 2009, 2010, and 2011 (Pre-Catalyst Fund) at two of the Catalyst Fund colleges, Bunker Hill and Brazosport.⁵ Our independent analysis of learning community seminars and clusters at Bunker Hill reinforced the evidence provided directly by the college in their Catalyst Fund application. Specifically, we found that learning community seminar and cluster students were more likely than a propensity matched comparison group to complete one or two levels of developmental math within two years; complete one or two levels of developmental English within one year; complete two levels of developmental reading in one year; earn more credits after one year and after two years; and to persist from fall to the spring or summer in the first year, and from fall in year one to any term in the second year. Put simply, *learning community seminars and clusters are an effective innovative practice that warranted scaling to serve most students*. Similarly, our analysis of the learning frameworks course at Brazosport College found positive impacts for students: learning frameworks participants persisted from fall to spring, and from fall to fall or

⁵ The evaluation did not have resources to examine the effectiveness of the innovative practice at all Catalyst Fund colleges.

spring in the second year at significantly higher rates than a propensity matched comparison group.

Table 1: Innovative Practices and Scaling Goals at Catalyst Fund Colleges⁶

College	Catalyst Fund Innovative Practice	Pre-Catalyst Fund Baseline	Scaling Goals
Brazosport College	Learning Frameworks Course (PSYC 1300)	6,645 students enrolled in Learning Frameworks between spring 2007 and spring 2012, including all first-time in college students annually as of fall 2010, and more than 50% of all credit students annually	Inter-institutional: Expand Learning Frameworks to all 43 Texas community college districts by 2016 as part of the New Mathways Project (led by the University of Texas Dana Center), beginning with 10 co-development colleges.
Bunker Hill Community College	Learning Community Seminars and Clusters	258 part-time students and 768 students of color enrolled in learning communities as of 2010-11	Intra-institutional: Expand the reach of learning communities among part-time students and students of color, so that 1,530 part-time students and 1,224 students of color enroll by 2016.
Durham Technical Community College	First-Year Experience Course (ACA 122)	49% of new credential seeking students with 12 credits or less enrolled in ACA as of 2011-12	Intra-institutional: Expand the reach of the First-Year Experience course, so that 98% of credential-seeking students who enter the college with fewer than 12 college credits earned enroll in the ACA by 2016.
Patrick Henry Community College	The Fundamentals of Cooperative Learning Pedagogy	100% of full-time Patrick Henry faculty has been trained, reaching 58% of the total student population in 2011-12	Inter-institutional: Expand training of cooperative learning pedagogy to 25 ATD colleges through the Southern Center for Active Learning Excellence Institute by 2016.

To guide our evaluation of **intra-institutional scale**, we developed a “Scaling Framework” largely adapted from the literature on scale summarized above. Although scale included a numerical expectation to serve “more or most” students, our evaluation defined scale more deeply as a *process of change that would alter the beliefs and norms of social interactions among college leaders*. We identified five ingredients of scale that reflected what we expected to be *levers for institutional transformation* that would create conditions for *altering organizational structures and norms of behavior and interaction*. We used these ingredients as an analytic lens to investigate how institutions effectively spread innovation within their college.

⁶ Patrick Henry and Brazosport also proposed intra-institutional scale goals, but these efforts were not part of our evaluation.

We hypothesized each ingredient as necessary for scaling, but none as sufficient in isolation:

- **Leadership and Commitment:** the buy-in and support across levels of leadership;
- **Broad Engagement:** the engagement of a broad base of stakeholders who are clear about the purpose of the work, and their respective roles and responsibilities;
- **Use of Evidence:** systematic processes and mechanisms to collect and analyze data, and communicate evidence to monitor and refine program implementation and scale;
- **Institutionalization Strategies:** transparent and intentional connection of the innovative practice to institutional priorities and systems (e.g., QEP, job descriptions, budget, etc.); and
- **Networks:** leveraging new and existing groups of individuals and institutions to support and strengthen scaling.

See *Appendix* for our outcomes and indicators rubric for these five ingredients.

To guide our evaluation of **inter-institutional scale**, we first documented the process for expanding the learning frameworks course in Texas, as part of the New Mathways Project, and then mapped that process against the intra-institutional scale factors above. One of our key assumptions was that the inter-institutional scale effort would need to help colleges tackle the internal scale issues alongside activities to train faculty and administrators in the new curriculum.

In order to answer our evaluation question, and examine how scaling was occurring, we employed several qualitative data collection methods, including in-depth site visits to Bunker Hill (twice) and Durham Tech (once) that included focus groups and interviews of stakeholders throughout campus; observing and interviewing Brazosport staff and faculty at the New Mathways Summer Institute; semi-annual interviews with Dana Center⁷ and Brazosport staff to investigate the roll-out of the New Mathways project; interviews with faculty and staff at 10 co-development colleges across the state of Texas; observations and focus groups with Catalyst Fund colleges at two DREAM conferences (2013 and 2014); and the review of interim and annual reports submitted to ATD. We also reviewed the case studies each college provided as part of their Catalyst Fund grant requirements.

⁷ The Dana Center at the University of Texas is the intermediary for the implementation of the New Mathways Project. Through this effort, they led the development of the revamped Frameworks course that was piloted by co-development colleges as part of Brazosport College's inter-institutional scale effort.

Section Three: Evaluation Findings on Intra-Institutional Scale

While colleges are only halfway into the four-year Catalyst Fund, they have made significant strides at moving from “more to most.” While numbers only tell a small portion of the scaling story, they provide a clear indication of the impact of the scaling process across these two institutions. At Bunker Hill Community College, the number of students served in learning communities between the 2010-11 and 2013-14 academic years increased 77 percent, from 2,601 students to 4,599 students, including more than 1,000 part-time students (a fourfold increase since 2010-11), and 1,146 students of color. At Durham Technical Community College over the same period, 77 percent of the target population enrolled in the First-Year Experience course, up from 49 percent.

Table 2: Intra-Scale Progress at Catalyst Fund Colleges

College	Catalyst Fund Innovative Practice	Scaling Goals	Scaling Progress Fall 2014
Bunker Hill Community College	Learning Community Seminars and Clusters	Intra-institutional: Expand the reach of learning communities among part-time students and students of color, so that 1,530 part-time students and 1,224 of students of color enroll by 2016.	1,020 part-time students and 1,146 students of color enrolled in learning communities in fall 2014
Durham Technical Community College	First-Year Experience Course (ACA 122)	Intra-institutional: Expand the reach of the First-Year Experience course, so that 98% of credential-seeking students who enter the college with fewer than 12 college credits earned enroll in the ACA by 2016.	77% of target students enrolled in ACA in fall 2014

Our evaluation finds that Bunker Hill and Durham Tech achieved scale in their innovative practice, moving from “more to most,” because they effectively applied the transformative ingredients outlined in the introduction of this report. Leadership at both colleges committed to sustaining these innovations at scale; faculty and front-line staff bought in to the innovative practices and shared responsibility for scaling the work; and, increasingly, these innovative practices became business-as-usual, influencing how stakeholders across campus interacted with one another to improve student success.

The challenge of scaling is how to build systems, design policies, and establish buy-in among stakeholders that enables the spread of innovation seen in Catalyst Fund colleges to occur. In this section, we describe what we learned about reaching scale, focusing on the two cases where the primary goal of participating in the initiative was to scale innovation within their institution: learning communities at Bunker Hill and the First-Year Experience course at Durham Tech. An important note to keep in mind about all the Catalyst Fund colleges is that each was specifically selected to participate in the initiative because they were committed to going from “more to most,” and had already demonstrated significant progress in laying the groundwork for achieving scale. Our findings, therefore, are based on building scale within this

context, rather than documenting the process from the earliest stages of development.

In our case-informed analysis of intra-institutional scaling at Bunker Hill and Durham Tech, we found evidence supporting the utility of each of the five transformative ingredients. However, the way in which these levers unfolded varied between campuses, suggesting there are multiple pathways or approaches to achieving scale. Below, we review how colleges navigated this work, and how aspects of each ingredient helped facilitate scale.

Leadership and Commitment

Without true commitment from leaders across campus, innovative practices will not achieve scale. Leadership is not limited to the president and other senior executives. Rather, at both institutions, leaders committed to the work included faculty and chairs in numerous academic departments, as well as deans, program directors, and staff in the student services division. Senior leadership supported the targeted innovation, particularly as a practice to foster student success. However, at both colleges, senior leaders, while knowledgeable and supportive of the scaling effort, delegated the strategic direction and day-to-day management of the work to the mid-level administrators leading the effort. Moreover, these mid-level leaders (typically deans) engaged a cross-divisional core team of faculty and student services staff to collaborate on the scaling efforts.

Without true commitment from leaders across campus, innovative practices will not achieve scale.

In other words, we observed a difference from traditional organizational structures at both Bunker Hill and Durham Tech. While faculty and student services staff typically have relative autonomy within their courses or within their individual programs, at these institutions, administrators, faculty, and staff in academic and student services *collaborated* to support and complement each other's efforts so that the innovative practice could be scaled. This collaborative leadership is not possible without commitment from senior leadership, and from leaders across divisions and departments.

This collaborative decision-making structure proved important for several reasons. First, the distributed leadership of these efforts created stability within the initiative. In the case of personnel transitions, either out of the institution or into a different role within the institution, knowledge of the work was dispersed enough across the core team that individuals could adapt or change roles to continue the work, without jeopardizing progress. It also fostered a sense of ownership of the work among the core team, and empowered them to advance the work without the obligatory delays related to higher-level approvals. Finally, situating this work outside of senior administration facilitated discussion, understanding, and buy-in from across the campus by removing some degree of hierarchy.

The colleges took distinct approaches to structuring leadership of their scaling effort, though the end result appears similar, in that both articulated a common vision of the purpose to all stakeholders. At Bunker Hill, the impetus for scaling learning communities came from faculty, and their desire to shift pedagogical approaches at the college. Interviewees throughout the college repeatedly described scaling of

learning communities as a faculty-driven initiative. In addition, faculty indicated that their support of this effort was, in part, because learning communities enabled them to broaden their academic content expertise to areas of personal passion. As a result, faculty took ownership of scaling as their own goal, rather than as a top-down administrative priority.

The mid-level administrative leaders of the Catalyst Fund are strong and well-respected within Bunker Hill, with strong links to faculty and senior executive leadership. The core leadership team had a clear and well thought out plan for scaling learning communities.

They facilitated a common vision for stakeholders on the importance of scaling learning communities, and partnered with faculty throughout the scaling process to create course structures, develop student learning outcomes for learning

In other words, scale became more than about learning communities as an innovative practice, and increasingly about effective teaching and learning pedagogies that could be incorporated by faculty in all of their courses.

community courses (especially thematic seminars), and make the case for learning communities to the broader faculty and department chairs, as well as to a new president that began in the first year of the Catalyst Fund initiative. In other words, scale became more than about learning communities as an innovative practice, and increasingly about effective teaching and learning pedagogies that could be incorporated by faculty in all of their courses. This broader framing appears to have strengthened the support for learning communities among faculty, chairs, and deans.

Catalyst administrative leaders at Bunker Hill communicate the scaling progress frequently to vice presidents and other senior administrators, regularly to the president, and periodically to trustees. The new president supports the scaling effort. She has supported the distributive leadership of the work to continue, and indicates that learning communities are an important part of a student's academic pathway, and an effective way to facilitate student success.

Vignette: The Faculty-Driven Approach to Learning Communities at Bunker Hill

Bunker Hill faculty is an engaged, dynamic group with a deep commitment to supporting student learning. It was out of this student-centered focus that faculty laid the initial groundwork for learning communities. In 2007, Bunker Hill applied for a Title III grant to increase the engagement, retention, and completion of full-time, degree seeking students. Prior to writing the grant, administrators met with faculty and support staff, and asked for their input on what students need to help them succeed in college. The approach that was most-favored, and included in the winning grant proposal, was that of learning communities.

As the Title III grant began, faculty continued to serve as leaders in the work. Year one was a planning year, and the director of learning communities convened four design teams, composed of faculty, staff, and administrators of all levels, to develop structures and policies to support learning communities. Most faculty involved in the design teams were supporters of the learning communities approach, and several had prior experience with learning communities, either at other institutions, or with similar courses offered as early as the 1970s at Bunker Hill. The focus on classroom instruction energized the Bunker Hill faculty. Learning communities began reaching the larger community of stakeholders at the college through word of mouth, within departments and among friends, as well as through professional development opportunities offered by the Office of Learning Communities.

In 2008, the initiative took a big step forward, when the Ad-hoc Committee, convened to review the proposal that learning communities become a requirement for full-time students, recommended institutionalizing learning community seminars as a "central and unifying feature of the College." This committee recommended making learning communities a requirement for new full-time students, and "stated in the college catalog as official college policy." In 2009, the curriculum committee approved the learning community seminar course, the academic affairs committee endorsed the seminar requirement, and College Forum approved both the course and the requirement. The results of these formal decision-making processes (designed to include faculty learning community advocates, as well as skeptics and detractors, to make sure a broad spectrum of opinion was represented) sent a strong signal to the campus that this approach was valuable, had widespread support among faculty, and reinforced as well as spurred renewed interest in teaching and learning.

Faculty from numerous departments point to both the student-centered pedagogical approach used in learning communities, as well as the flexibility to cover content that is both personally engaging and engaging for the students, as motivating factors for teaching these courses. As one faculty member noted, teaching a learning community requires a different instructional approach, where you are challenging students to think critically, instead of a more typical instructor-centered approach with one "sage on the stage". This focus on teaching and learning resonated with a number of faculty members from across the campus, and last summer, a group of faculty requested a lunch with the president to discuss the creation of a Teaching and Learning Institute that would focus on pedagogical issues in the classroom. The Division of Humanities and Learning Communities has supported this effort, organizing professional development opportunities around the instructional approaches used in learning communities for the entire campus. Faculty and administrators alike describe the scaling of learning communities as the result of faculty leadership and ownership of the effort, and the pedagogical approach inherent in learning communities is spilling over into other courses.

At Durham Tech, by comparison, the scaling of the First-Year Experience course is led by administrators who recruited a core leadership team, and then worked with the broader community to train staff, and to communicate the need and utility of such a course. The student services administrators leading the Catalyst Fund are well respected within the college, and the core team is linked to the Achieving the Dream student success team that has operated since 2004. Interviewees articulated a

common vision about what was being scaled (the ACA First-Year Experience course), and how scale would be measured. They also understood that scaling ACA was an institutional priority, and not simply another initiative.

Although the First-Year Experience course is not a faculty-driven effort at Durham Tech, interviewees indicated that having a highly respected faculty member on the team – and thus a key leader of the design, implementation, and scale of the ACA – is a critical reason for the success of this effort. This faculty leader designed the ACA course, developing lesson plans and student learning outcomes, and wrote a textbook that has been adopted by the state of North Carolina. In fact, the state based a new policy requirement for all students to take a first-year experience course within the first 30 credits of their college experience, in part, on the Durham Tech course curriculum. Among interviewees, there was widespread understanding that the core team’s decision to assign full-time faculty to teach the First-Year Experience course – and the college’s allocation of resources to hire additional full-time faculty who exclusively teach the ACA – signaled the institutional commitment to scaling the work.

Durham Tech’s president – a former leader of the college’s Achieving the Dream initiative – supports the scaling, and leaves the day-to-day decision making to the mid-level administrators and other core team members leading the work. Overall, the college has had stable leadership, even though roles and responsibilities for some faculty and administrators have changed. Many interviewees indicated that the continuity of leadership was an important factor contributing to scale at the college.

The successful scaling of the ACA occurred alongside a significant policy change – a co-requisite policy for all developmental education students to take the First-Year Experience course – and a divisional reorganization of responsibilities and reporting lines that merged advising and admission staff.

Durham Tech used the Catalyst Fund, and scaling of the ACA, as a lever to restructure organizational authority and reporting lines within the college. In its proposal to Achieving the Dream, the college articulated that it wanted to “blur the lines between faculty and staff” at this critical entry point for students at the college, thus indicating that traditional silos between academic and student services needed to be broken down in favor of more collaborative decision-making across these divisions. The successful scaling of the ACA occurred alongside a significant policy change – a co-requisite policy for all developmental education students to take the First-Year Experience course – and a divisional reorganization of responsibilities and reporting lines that merged advising and admission staff. Most interviewees saw this reorganization as a logical outgrowth of earlier organizational reform that created a new mid-level position, the dean of student engagement and transitions, with authority for both faculty and student services staff involved with the ACA.

Broad Engagement

Broad engagement of campus stakeholders is an essential element of transformation, if an innovative practice is to be scaled. Colleges have to find ways to create formal and informal communication channels to keep early champions aware and engaged, and bring new supporters into the fold. At Bunker Hill and Durham Tech, broad engagement happened formally when: 1) scaling the innovative practices was discussed at convocation and in faculty meetings, and 2) when leadership teams at each college used official communication channels to invite

campus stakeholders to upcoming training opportunities and to share key milestones along the pathway to scale. Informally, both colleges shared information within departments, between staff participating in the innovative practice and other faculty, in conversations between core leadership and staff, and in numerous other interactions and conversations across campus. Interviewees at both colleges referenced the frequency of communication about scaling from numerous campus leaders, including the president, but more often from the mid-level administrators responsible for the effort, as well as faculty and staff most closely involved (i.e., those on the leadership team).

On both campuses, interviewees reported a high degree of faculty support for learning communities and the First-Year Experience course. For many, this faculty support is the result of having direct experience with the innovative practice. But, interviewees resonated most often with the student-centered approach of the college's efforts to scale. At Bunker Hill, stakeholders described campus conversations about learning communities focused on student success, and how this approach to pedagogy fostered academic interest and curiosity among students. Stakeholders at Durham Tech also conveyed that campus dialogue about the ACA was less about the course itself, or about specific roles and responsibilities, and more about the *impact* of the course on student success. In both cases, interviewees articulated a "student-centered" lens when they discussed the innovative practice they were scaling.

On both campuses, interviewees reported a high degree of faculty support for learning communities and the First-Year Experience course. For many, this faculty support is the result of having direct experience with the innovative practice.

Another indication of the value this broad engagement generated was that changes needed to support scaling yielded very little resistance on campus. This lack of open resistance, especially among faculty and staff whose roles and responsibilities were changing, is remarkable. Expanding learning communities to part-time students at Bunker Hill, for example, put considerable pressure on registration, course scheduling, and space. Yet, leaders responsible for these basic college functions embraced the changes, and found ways to adapt to new rules and processes. At Durham Tech, faculty supported the new co-requisite policy, and provided little active resistance to the decision by senior administrative leaders to allocate resources for full-time faculty and staff to teach the First-Year Experience course – resources that could have been allocated to other disciplines or programs.

Our sense is that this broad engagement signaled to college stakeholders the importance of scaling the innovative practice in order to improve student success. As a result, the necessary organizational and cultural changes were widely supported and embraced, especially by the faculty and staff who were most affected by the decision to scale learning communities and the First-Year Experience course. This support is evidenced by an increased demand by faculty and staff to become involved in these changes and to expand their reach. At Bunker Hill, the faculty request for the establishment of a Teaching and Learning Institute can be viewed as a direct extension of the impact the pedagogical approach used in learning communities has had on faculty. At Durham Tech, the reality of more than 125 staff and faculty being trained to teach the First-Year Experience course – when the majority of sections are taught by full-time instructors hired explicitly to teach the course – points to the widespread interest across campus in this innovative approach to support students' transition into college. Even deans and the president

occasionally have taught a section of the ACA. By maintaining this engagement of partners across campus, both colleges have generated support for the systemic changes undertaken.

Use of Evidence

A culture of evidence is a hallmark of the Achieving the Dream approach to fueling student success in its network colleges. Both Bunker Hill and Durham Tech understand the value of using institutional data on course effectiveness for continuous improvement. The schools regularly review data on scaling progress and student outcomes, such as course completion and retention. In fact, some interviewees reported that the evidence (both institutional data and first-hand testimonials) of the impact these courses had on students generated their support and buy-in for scaling. Even with this commitment to collect and use data for continuous improvement, both colleges have struggled with how to effectively communicate the lessons

learned through this process to the broader community – beyond the Catalyst team and or other leadership teams at the college. Interviewees less closely involved with scaling the innovative practice were

A culture of evidence is a hallmark of the Achieving the Dream approach to fueling student success in its network colleges. Both Bunker Hill and Durham Tech understand the value of using institutional data on course effectiveness for continuous improvement.

almost always unfamiliar with the data and evidence that showed the effectiveness of learning communities or the First-Year Experience course.

Interviewees at both colleges spoke very favorably of their institutional research (IR) department. Durham Tech considerably enhanced its IR capacity during the Catalyst Fund period, as part of the broader organizational restructuring of the college. Numerous stakeholders acknowledged the importance of this new Research, Evaluation, Assessment and Planning office. Notably, senior leaders at both colleges credit their longstanding involvement with Achieving the Dream as the impetus for their increased focus on evidence and the use of data to assess program effectiveness.

At both colleges, the core leadership team involved in the scaling efforts regularly reviewed data on the effectiveness of their respective innovative practices. At Durham Tech, these conversations happened outside of the core leadership team, with the larger Student Success Team. During a Student Success Team meeting, we observed a broad segment of stakeholders – including senior and mid-level administrators, faculty and student services staff, and institutional research - actively discussing data on ACA student outcomes, raising questions about gaps in outcomes among different groups of students, and generating ideas for how to close these gaps.

Vignette: Moving from Data Dashboards to Data Engagement at Durham Tech

Around the table at the monthly Student Success Team meeting are individuals ranging from the vice presidents to faculty, student advising and success staff, and institutional researchers. The agenda for the day includes a discussion of implementing a new integrated planning and advising services system, updates on progress with the Catalyst Fund, and a review of data from the first year of scaling the First-Year Experience course. The conversation is pleasant and productive. When the focus shifts to reviewing data on student enrollment and outcomes, instead of glazed looks and silence when asked if there are any questions, the group launches into a substantive discussion of who is benefitting from the expansion of ACA. Several participants express concern that there is a significant gap in the course success rates for African American students; all other students pass with around a 70 percent success rate, compared to only a 50 percent success rate for African Americans. The agenda quickly becomes a conversation about possible solutions to this gap in performance.

This conversation is neither instigated nor led by senior leadership. Rather, all members of the team are engaged in the conversation, asking detailed questions about the data, and trying to understand why the institution is doing poorly with this segment of the student body. This level of engagement demonstrates a comfort with data that is rarely displayed on college campuses. It also demonstrates how Durham Tech embodies a mature culture of evidence, where stakeholders at multiple levels of authority and across divisions and departments do not fear data, but use data to ask questions and learn from the insights such an analysis and conversation can yield. It also shows a shared accountability at the college for using data to refine practice.

Durham Tech interviewees pointed to such conversations as typical – the “new normal” that emerged after years of participating in the Achieving the Dream network, accelerated by recent capacity enhancements in institutional research. Interviewees also cited the action research undertaken by a faculty leader during the early scaling process for the First-Year Experience course that identified the best model for the ACA.

At Bunker Hill, the Office of Institutional Research is developing greater qualitative capacity to address questions from faculty and administrators (both for the Catalyst Fund and beyond). To date, Institutional Research has collected data on instruction from faculty and staff, for example, about useful topic areas for the Teaching and Learning Institute. They hope to expand capacity to conduct focus groups on academic and college life with students. Interviewees also reported that department chairs and faculty leaders are beginning to show greater interest in partnering with Institutional Research to document student outcomes in their individual courses and departments. For example, we heard from a couple of departments their interest in knowing if learning community students performed better in discipline courses, and made better progress toward a degree, than students who did not take a learning community.

Bunker Hill and Durham Tech are not focused solely on student outcome data. At both colleges, learning outcomes were designed into the curriculum, which signaled that learning communities and the First-Year Experience course were academically rigorous, and were held to the same standards and requirements of discipline-based academic courses. Interviewees described the incorporation of student learning outcomes into these courses as enhancing the credibility of these innovative practices, and generating buy-in especially among faculty and academic leaders. At Bunker Hill, faculty teams developed and vetted student learning outcomes for both seminar courses and clusters, agreeing on a core set of outcomes for all learning communities, as well as specific outcomes for seminars and clusters. Because of these learning outcomes, academic departments have knitted the seminar courses

into associate degree program requirements, so that students are not required to take an extra course that does not count toward their degree. Similarly, faculty at Durham Tech who developed the First-Year Experience curriculum were very cognizant of the need for ACA credit to be accepted as transfer for its students upon completion of course. Accordingly, faculty aligned the curriculum and learning outcomes with state standards for this course in order for the student success courses to meet the transferability requirements. Moreover, as noted above, recent statewide policy changes for the ACA course were largely based on the Durham Tech curriculum.

Institutionalization Strategies

At the onset of the Catalyst Fund evaluation, we assumed that each college had institutionalized their innovative practice, but that more changes were needed to scale and serve most students. This particular ingredient – institutionalization - was the least fleshed out, but was generally intended to capture how colleges connected the scaling of the innovation to larger institutional priorities. We hypothesized that several key structural elements would reflect a degree of institutionalization necessary to achieve scale, including:

- Creating formal leadership roles specific to the innovation;
- Identifying and supporting early champions;
- Establishing strategies to address resistance;
- Identifying revenue sources to sustain the innovation; and
- Incorporating the innovation into the strategic planning process.

During our early data collection, we learned that the colleges addressed the first three elements earlier during institutionalization, as they moved from serving “some” to “more” students before the start of the Catalyst Fund. Thus, we could not document these changes directly, and given the early adoption of these elements in both cases, we believe that a)

formal, empowered leadership, b) the use of faculty and staff champions, and c) engaging resistance are better suited as indicators of the leadership and commitment element of

Another way of thinking about these policy changes is that to scale their innovative practice, both colleges made it a default for entering students rather than one to opt-in.

scaling, or of broad engagement as defined in this report.

We did, however, find evidence that both colleges adopted policy and practice changes that enabled the scaling of learning communities and the First-Year Experience course to move forward. For example, both colleges changed enrollment requirements and policies to facilitate scaling: at Bunker Hill, enrollment in a learning community course was first made a requirement for all full-time students, and then expanded for part-time students enrolled in at least nine credits as part of the Catalyst Fund scaling efforts. At Durham Tech, the First-Year Experience course was initially made a co-requisite for all developmental education students, and this policy was refined over time so that most students would have to enroll in the ACA. In other words, the innovative practice at each college shifted from a student choice, to a requirement that students could not avoid. Another way of thinking about these policy changes is that to scale their innovative practice, both colleges made it a default for entering students rather than one to opt-in.

We also found that both colleges committed financial resources to support the scaling efforts, and that the decisions about funding those efforts were integrated into the standard budgeting and planning processes. At Bunker Hill, the Office of Learning Communities was added to the budgeting process and protected from budget cuts in recent years, despite declining revenues college-wide. These resources provided stipends for faculty and paid for ACE mentors – two aspects of learning communities that almost all interviewees indicated were critical to building support and buy-in among faculty, and that helped students feel more connected to the institution. These resources also were used to offer regular professional development and training opportunities for faculty and staff. As a result, interviewees supported these programs, and by extension the scaling of learning communities, because these opportunities served the entire college community, instead of a select few.

At Durham Tech, scaling the First-Year Experience course was wrapped up in larger organizational changes previously identified in this report. Thus, scaling became integral to the organizational changes that the college was implementing through its budgeting and planning process. Through this process, the executive cabinet identified resources to

adequately staff the First-Year Experience course, finding five new full-time positions for First Year Experience advisors. In addition, key faculty from the English Department

In short, our evaluation found that tying scaling efforts to administrative and financial policies appears to be a key element that facilitated the scaling of the innovative practice on both campuses.

moved to the Department of Student Engagement and Transitions to take on administrative and teaching responsibilities for ACA. During this organizational restructuring, the admissions and advising areas were combined into a new office in the Department of Student Development and Success. The operational change was that new First-Year Experience advisors are cross-listed as faculty in the Department of Student Engagement and Transitions, and report to both departments, serving as the collaborative bridge between student support services and academics. These organizational changes had the full support of the president and key executive leaders, which further cemented the path to scale. Interviewees pointed to these organizational changes and additional resources for faculty as “legitimizing” ACA as a regular college offering, rather than as a grant-funded program.

In short, our evaluation found that tying scaling efforts to administrative and financial policies appears to be a key element that facilitated the scaling of the innovative practice on both campuses.

Networks

Bunker Hill and Durham Tech have participated in the Achieving the Dream network for some time. Durham Tech was one of the original 27 colleges that launched ATD in 2004, and along with Bunker Hill, are designated leader colleges with documented success of experimenting with innovative practices, and a history of using data effectively as part of their institutional reform efforts. In 2014, Bunker Hill received the Leah Meyer Austin Award from Achieving the Dream in recognition for demonstrating “outstanding achievement” in designing and supporting systems to promote student success. The Catalyst Fund created the opportunity for these two

colleges – along with Brazosport and Patrick Henry – to become a “sub-net” of peer leader institutions with a common purpose to scale innovative practices.

In addition to ATD, both colleges have engaged with a number of external networks during their scaling work. Yet, these networks often are not resources for Durham Tech or Bunker Hill. Rather, the Catalyst Fund colleges are increasingly looked to as experts, especially with regard to their innovative practices. For example, Durham Tech has been engaged in statewide developmental education reform activities in North Carolina, and also leveraged its expertise to influence the state regulations on student success courses, so it could continue to target its course toward entering students. Moreover, as noted previously, the state system asked the faculty leaders at Durham Tech who developed the First-Year Experience course curriculum to adapt it for use statewide.

Leaders at Durham Tech also described the Catalyst Fund “sub-net” as re-energizing its reform efforts, and creating momentum and accountability within the college. Some interviewees credit the decade-long institutional change efforts it has undergone for seeding the culture at Durham Tech so that scaling ACA could be achieved. Bunker Hill also credits its involvement with ATD as an important factor in the strides the college has made, particularly in data-driven decision-making and introducing a language and focus on equity in student success at the college. The Catalyst Fund “sub-net” enabled the Office of Learning Communities to engage key community partners more intentionally. In particular, Bunker Hill initiated a partnership with the Museum of African-American History in Boston and Nantucket to expand the classroom beyond the campus, for learning communities and for other courses. Interviewees report that these expanded community networks reinforce the faculty-driven nature of learning communities as a teaching and learning initiative, fostering both place-based learning and culturally responsive pedagogy.

Section Four: Evaluation Findings on Inter-Institutional Scale

Two of the four Catalyst Fund colleges proposed scaling their innovative practice to other institutions.⁸ At Patrick Henry, campus leaders proposed to expand the Cooperative Learning Initiative to 25 Achieving the Dream affiliated institutions. At Brazosport, leaders proposed using the Catalyst Fund to adapt and expand a student success course, Learning Frameworks, to colleges across Texas as part of the New Mathways Project.

Achieving scale across institutional settings is a multi-faceted process. The cross-institutional nature of this work means that the process must meet both the same quality standards in terms of design, effective practice, manageable structures, and stakeholder engagement that are necessary to achieve scale within an institution, and figure out how to meet or adapt those standards for each unique setting in which the initiative is to be scaled.

In other words, inter-institutional scaling is a complex endeavor, because it encompasses both developing and supporting an innovation across diverse campus settings, while also supporting transformation within institutions.

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⁸ Achieving the Dream defined achievement of scale for the Catalyst Fund in the same manner for both intra- and inter-institutional scale: effective interventions are expanded to serve significantly more/most of the target population, with more being defined as 25.1 percent to 60 percent of the target population, and most being more than 60 percent of the target population.

Vignette: Inter-Institutional Scaling at Patrick Henry Community College and Brazosport College

Patrick Henry Community College: Facilitators from Patrick Henry's Southern Center for Active Learning Excellence (SCALE) Institute trained faculty and staff at other institutions around the country on the principles of cooperative learning as an effective student engagement and success practice. As of fall 2014, SCALE facilitators had trained more than 120 institutions, including 77 colleges during the two years of the Catalyst Fund – considerably more than they had proposed. Because the scaling work at Patrick Henry focused on providing professional development to faculty and staff, understanding the extent to which it reached students across so many institutions was a challenge. Furthermore, the focus of the Catalyst Fund evaluation was to understand how innovations directly targeting students can be scaled. For this reason, we were unable to deeply investigate the process of inter-institutional scale at Patrick Henry, and do not know the extent to which the inter-institutional scaling at SCALE has led to changes in the beliefs and structures at trained colleges with any systematic detail.

Brazosport College: The New Mathways Project, led by the University of Texas' Dana Center, launched an ambitious redesign of developmental math among all community colleges in Texas. As part of this project, colleges agreed to deliver a developmental math course, Foundations, and a student success course, Frameworks, that was designed to foster completion generally and for the math sequence, specifically. Ten co-development colleges launched this inter-institutional scale effort in fall 2013. Brazosport had a well-established student success course on campus that had a demonstrated impact on students. When the college heard about the New Mathways Project, it contacted the Dana Center to discuss scaling Frameworks across the state. Brazosport staff was involved in the design team to establish the scope of the course, and participated in working groups to develop and revise the curriculum. Brazosport faculty piloted the Frameworks course in spring 2013, in advance of its launch with the co-development colleges.

To understand the scaling and context of Frameworks in Texas, we conducted interviews and focus groups with partners, including observing the 2013 New Mathways Summer Institute, and reviewing the training materials, conducting semi-annual phone interviews with Brazosport College and Dana Center staff, and interviewing 24 administrators and instructors from 10 colleges about the implementation of Frameworks on their campuses. Based on these data, it appears that most institutions will not scale the Frameworks within their colleges. Of the 10 co-development colleges, only two, including Brazosport, are implementing the Frameworks course in more than one or two sections.

We examined the process of inter-institutional scale through the efforts of the Brazosport College and the Dana Center to expand Learning Frameworks to ten co-development colleges as part of the New Mathways Project. A recent report by MDRC, the evaluator for the New Mathways Project, also provides evidence about successes and challenges co-development colleges face in implementing new courses on campus (*Zachry, Rutschow & Diamond, 2015*).

Although inter-institutional scale of this course has not yet been achieved, our evaluation identified nine elements of inter-institutional scale that are important if colleges want to expand an innovative practice from one institution to many. We consider the nine elements as a preliminary guide to promote discussion among the designers and stakeholders of an innovative practice, and to promote intentionality in planning for scale.

Nine Preliminary Factors for Inter-Institutional Scale

- 1. *A credible third-party lead is key to spreading innovative practices across colleges.*** An entity with capacity to manage initiatives across multiple campuses can provide leadership and guidance across participating colleges, and offer support on the details of implementation in institutions. Colleges are less likely to view a third-party organization as a competitor, and may perceive them as having more expertise. In the inter-institutional scale of the Frameworks course, the Dana Center played this role. The Dana Center is widely recognized for its expertise in mathematics and science education, and its staff members are experienced curriculum developers. In addition, the Dana Center is noted in Texas for successfully collaborating with colleges to improve student outcomes.
- 2. *The targeted practice to be scaled should be aligned with institutional needs, drawing on existing knowledge and evidence, and be adaptable to local context.*** For practices to be effectively taken up across institutional settings, they need to be viewed as effective *and* aligned with institutional needs or priorities. Additionally, institutions may need to adapt elements to make the practice fit within the local context. At the onset of the New Mathways Project, the Dana Center brought together a small group of campus leaders from several colleges, including Brazosport College, to design a revamped Frameworks course. Representatives from colleges across the state participated in working groups focused on the four content strands identified as “core elements” for a student success course. The idea was for this approach to yield a Frameworks course that was widely applicable across institutions. Among co-development colleges, more than half were not involved with the development teams, and therefore not familiar with the curriculum until it was rolled out at the Summer Institute for the fall 2013 semester. During the first year of implementation, some institutions found it challenging to implement the curriculum as designed, and asked the Dana Center for leeway to adjust how the course was taught.
- 3. *In addition to the local context, the inter-institutional process needs to take into consideration the policy contexts in which colleges operate.*** While local institutional culture is a critical factor influencing implementation, colleges do not operate in a vacuum. They are subject to a number of external forces, including public opinion, consumer demand, and state and federal policies. Accordingly, the process for expanding the innovative practice must account for, and be sensitive to, how these factors influence college operations. A number of colleges found implementing the for-credit Frameworks course challenging, in light of recent state policy changes that capped the total number of credits allowable in programs of study. Because of these changes, many schools did not have the space to offer Frameworks without removing courses of study they thought were more relevant to the degree plan.
- 4. *The innovative practice to be scaled should be piloted, with significant, formal feedback and reflection processes, before it is implemented in participating colleges.*** At the end of the design and development stage, it is important to conduct a trial run of the innovative practice to discover what refinements may be necessary, and to identify any unforeseen problem areas. The challenge with such a pilot in the inter-institutional setting is that implementation may run into different problems at different institutions. Brazosport College served as the sole pilot site for Frameworks, and while the

faculty was meaningfully engaged in refining the curriculum, the implementation context was considerably different from other institutions. Brazosport had scaled the Frameworks course prior to the Catalyst Fund. In contrast, for the co-development colleges, the fall 2013 roll-out of the Frameworks course was the first exposure most institutions had to the curriculum, and the first time college-specific challenges were identified across the project. The ability of the lead entity and partner colleges to adapt after these first challenges is a key factor for successful implementation and scaling.

5. ***High-quality, relevant professional development and technical assistance opportunities are critical to spur implementation.*** Faculty and staff must be trained and knowledgeable in the innovative practice, especially one driven by external partners, if they are to successfully implement it on their campuses. Moreover, to successfully scale the practice, colleges need support in navigating change management within their institution to help address barriers to implementation, engage campus and relevant stakeholders, and build systems that incorporate the new practice into standard operating procedures. The Dana Center not only convened the initial Summer Institute to train faculty and administrators on implementing the course, but held ongoing technical assistance calls to address issues and provide support. The training and ongoing support provided by the Dana Center and a network of ambassadors was universally well regarded. Faculty appreciated the chance to interact with the curriculum closely, as well as to learn from their peers, and indicated these supports generally left them well prepared to teach the course. This technical assistance focused solely on the content and delivery of the curriculum, and did not include the transformative ingredients colleges need to address in order to scale an innovative practice within their institutions.
6. ***Peer support is a valuable aid to help institutions learn from one another, and to connect with others who are experiencing similar challenges with implementation.*** While expert support is necessary to prepare and coach colleges on implementing the innovative practice, there is additional value in providing space for peers to share and reflect with one another. Brazosport and several other institutions played this role for the inter-institutional scale of the Frameworks course, making their faculty available as ambassadors to other institutions to address questions as they arose. While some colleges knew about this feature, and a few utilized it, most did not. Consideration should also be given to effectively communicate and encourage use of these supports as part of the inter-institutional scale process.

Vignette: The Co-Construction of the Frameworks Curriculum

While the Dana Center played the lead role as convener, trainer, and technical assistance provider in the New Mathways Project (NMP), it collaborated with several colleges, including Brazosport, in the design and pilot phases of the Frameworks course that was launched in conjunction with the Foundations Mathematics course in NMP. In early 2012, the head of Brazosport's student success center joined four individuals from colleges with a strong history of student success courses to provide guidance and input to the Dana Center on the objectives and content of the Frameworks course. After this team agreed on the scope and objectives of the course, four development teams were convened to draft the Frameworks curriculum. Two individuals from Brazosport served on these teams, and provided further input on the content of the course based on their experiences with a Learning Frameworks course that had been in operation at Brazosport since 2007.

The closest collaboration between Brazosport and the Dana Center occurred in spring 2013, when Brazosport piloted the NMP Frameworks course on campus. Faculty engaged regularly with Dana Center staff to provide feedback on what was working well with the curriculum, and how it could be improved. In addition to participating in these feedback sessions, faculty at Brazosport teaching the Frameworks course regularly wrote about implementation. As a result of this pilot, faculty identified several areas where the curriculum could be improved, particularly in the area of lesson pacing, as the curriculum was difficult to complete in the course time allotted. In addition, faculty piloting the course found several holes in the curriculum. Brazosport faculty collaborated with the Dana Center to address these by co-writing two additional lessons.

In addition to further revising and strengthening the curriculum, the pilot provided the Dana Center with a first look at implementation and course-specific lessons and feedback. The Dana Center then shared this information with co-development colleges as the initiative rolled out to nine colleges for the 2013-2014 academic year. At the July 2013 Summer Institute, where NMP was introduced to faculty and administrators at the co-development colleges for the first time in any depth, Brazosport faculty who had piloted the Frameworks course earlier that spring facilitated and led sessions on teaching the course. Having individuals who had experience teaching the Frameworks course proved useful in modeling the course to faculty at the co-development colleges, and providing honest feedback about what worked well and what required adaptation and adjustment. As with any new curriculum, it takes time for faculty to become adept at implementation. Having faculty with first-hand experience presenting about the instructional learning curve provided credibility in a way that would not have been feasible if the curriculum been presented solely by those without classroom experience.

- 7. Leadership across institutions need to support and demonstrate commitment to scaling the innovative practice by making the case at their institutions, providing resources, and setting expectations for implementation and scale.*** According to research literature, including our evaluation, leadership commitment is a critical factor for any change initiative. Key to this element is that the commitment is both strong out of the gate, and maintained over the course of the scaling effort. Without this sustained focus and attention, staff and faculty will be less likely to view the initiative as an imperative, and to adapt the practice as needed to meet institutional needs. Across the co-development colleges, initial buy-in was an important factor to participation in the project. Almost universally, interviewees indicated the college president or district administration signed them up for the Frameworks course and the New Mathways Project. Faculty and staff assigned to implement the Frameworks course were mostly unaware of the curriculum until they attended an initial kick-off institute in summer 2013. Senior leadership was engaged early

in the development process of this statewide initiative, but leadership was not distributed beyond the senior administration team on campus in most instances.

8. ***Faculty and staff responsible for implementing the practice, including the champions of existing efforts, need to be engaged early to generate buy-in and support, and to help shape the direction of the scaling work.***

Faculty and staff ownership of an innovative practice is key to generating institutionalization and scale. Whether the initiative begins as top-down or bottom-up, without a transition to co-ownership by faculty and staff, change is unlikely to be sustained. Frontline support and buy-in is necessary for any practice transmitted through the classroom or student services. At most co-development colleges, knowledge of and involvement with the New Mathways Project, and the Frameworks course in particular, was confined to a small set of individuals. In such instances, the college did not make much progress in implementing the Frameworks course. Most of these colleges had offered the Frameworks course once or twice, but many were no longer offering any sections of the course. In contrast, in the two instances where colleges had success in implementing and scaling the Frameworks course, they had made strides in integrating these efforts into existing institutional priorities, such as reforming developmental education or requiring a student success course for all new students. Stakeholders in these institutions pointed to this connection between existing priorities and the Frameworks course as a factor that helped generate support and buy-in across a wider stakeholder population, and as a driver in scaling the Frameworks course at their schools.

9. ***An independent evaluation is needed to provide feedback on early challenges to implementation, and to document student success.*** Data, particularly in the Achieving the Dream network, are a valued commodity. Not only can evaluation help stakeholders understand and address challenges and areas for improvement, but it can identify strengths in implementation progress and student outcomes. The former is useful for program improvement, while the latter can be important for advancing buy-in among different audiences across an institution. The Dana Center partnered with MDRC to evaluate the New Mathways Project. Early site visits were used to collect formative feedback on challenges, including: issues with scheduling courses; the length of courses; whether Frameworks and Foundations were both required; financial aid implications if one of the two courses were dropped; and concerns that Frameworks and Foundations were not transferable, despite awarding college credits for students. Having an understanding of these issues led the Dana Center to adapt the curriculum and expectations for its use between the first and second years of the project.

We offer these nine factors as a preliminary starting point for stakeholders planning for inter-institutional scaling of an innovative practice, especially in the design phase of a scaling initiative. Additionally, we hypothesize that the lack of success in scaling the Frameworks course from one college to many in Texas is, in large part, because the inter-institutional scale process did not incorporate efforts to account for how to integrate the innovative practice into the local college context on a case-by-case basis. The lead entity and each partner institution should share responsibility for such intra-institutional scale considerations, because achieving scale requires local stakeholder engagement and ownership to transform their organizational cultures.

Section Five: Recommendations for Scaling Innovative Practices

Scale is a complex process within an institution, let alone across many. Although the experience of scaling was different at Bunker Hill and Durham Tech, both colleges adopted the innovative practices from the bottom-up with widespread buy-in and support. In addition, both schools achieved intra-institutional scale, with most students served by learning communities and the First-Year Experience course, respectively. On the other hand, while many colleges piloted the Frameworks course in Texas, after two-years, they did not achieve inter-institutional scaling. Most students in these additional schools did not enroll in Frameworks as part of New Mathways.

Based on our evaluation engagement with stakeholders in Texas, we learned that despite providing a number of strong supports and facilitation for the design and implementation of the Frameworks course, the mechanisms used were insufficient to achieve deep impact across institutions without a greater accounting for the local and policy contexts in which individual colleges operated.

These findings challenge the assumption that scale can be achieved across settings simply by introducing a model or practice, and providing training and support for its implementation. To truly achieve inter-institutional scale, it is not sufficient for the innovative practice to be

Perhaps the largest takeaway from this work is that there is no single pathway to achieving scale. Each institution took an approach that accounted for the context of their campus - that acknowledged the institutional culture, existing tensions, preferred ways of working, and key supporters and detractors on campus, and was responsive to this context.

supported and managed externally across institutions. Rather, careful attention must be paid to the context within institutions, and to the levers necessary to achieve transformational change within those settings. Lack of inter-institutional scale underscores the importance of addressing the transformative ingredients within colleges to change the cultural norms and incentives for how campus stakeholders work together. Put simply, without addressing the intra-institutional context, achieving inter-institutional scale does not appear to be possible.

Consistent with the emergent literature on scale, the Catalyst Fund colleges that achieved intra-institutional scale implemented a process to alter their basic organizational structures – empowering decision-making by faculty and staff, and building collaborative administrative leadership between academic and student services divisions. As we noted in the introduction to this report, if efforts to scale are focused on the practice itself, rather than the context in which these practices are operating, then scale is unlikely to be achieved. Our evaluation found that the campus communities own these efforts, and are clear about how and why institutional policies and practices were aligned to support scale. We also documented numerous ways each college structured policies and engaged stakeholders to create an environment in which their innovative practices could be scaled. Perhaps the largest takeaway from this work is that there is no single pathway to achieving scale. Each institution took an approach that accounted for the context of their campus - that acknowledged the institutional culture, existing tensions, preferred ways of working, and key supporters and detractors on campus, and was responsive to this context.

Based on this case-informed evaluation, we have recast our five transformative ingredients of intra-institutional scale:

- **Leadership and commitment** across divisions and departments, and broadly inclusive of administrators, faculty, and staff, connected the scaling efforts with and leveraged institutional planning and accountability processes so they were aligned to support the innovative practice.
- **Financial and administrative prioritization** generated buy-in from a broad base of stakeholders, who were supported with sufficient human and financial resources to make the necessary changes to support scale.
- **Use of evidence** to monitor and refine implementation benefited from increased institutional research capacity, and improved systems to collect, analyze, and discuss data for continuous improvement.
- **Transparent and supportive policies and practices** were the result of an inclusive engagement of stakeholders who designed and vetted necessary policy and practice changes, and shared responsibility for action within their respective divisional and departmental lines of authority. These policies and practices could not have been achieved without collaborative decision-making across academic and student services stakeholders.
- **Networks** were leveraged, including connections with new partners to reinforce and support the innovative practice, as well as leveraging the notoriety from existing networks, like Achieving the Dream, to support scaling.

We also found that broad engagement is a central element of achieving scale, but as the transformative ingredients indicate, *broad engagement overlays all areas of scaling*. In fact, in each of the five transformative ingredients, colleges need to engage a broad base of stakeholders – whether to bring them into the leadership and decision-making process, vet and refine policies and practices, or communicate how the innovative practice is a priority for the college. Similarly, the experience of these Catalyst Fund colleges helped us become more focused on what institutionalization strategies are critical to scale. Our analysis suggests that in order to achieve scale, colleges must prioritize the innovative practice within administrative and financial processes.

...scale requires a willingness and commitment to change organizational structures, to address power and hierarchy, and to build a common vision that a broad base of administrative, faculty, and staff can support.

While these five ingredients can provide a conceptual map for college leaders at all levels of an institution who want to scale an innovative practice to serve most students, the more fundamental takeaway is that scale requires a willingness and commitment to change organizational structures, to address power and hierarchy, and to build a common vision that a broad base of administrative, faculty, and staff can support.

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Appendix: Initial Outcomes and Indicators Rubric

Outcome Areas	Indicators
Leadership and Commitment	<ul style="list-style-type: none"> • Support and buy-in among college presidents and administration to scale targeted practice • Engagement and support of Board of Trustees to scale targeted practice • Clear leadership structure for scaling targeted practice with intentional plans and strategies developed and executed • Side-by-side collaborative leadership so all voices are respected and heard regardless of divisional or departmental hierarchies • Clarity about faculty and staff roles in implementation and expansion of targeted practice • Common vision across key stakeholders about scaling, the connection and impact on student success, and the structures and support needed to sustain these changes
Broad Engagement	<ul style="list-style-type: none"> • Recognition of scaling plans and leadership involvement across campus • Formal and informal communication processes to create “buzz” on campus – generating interest and increased demands of faculty and staff to participate in targeted practice • Student-Centered Lens frames all decisions and discussions about implementation, across all divisions and departments • Support and buy-in among front-line student services staff to direct students to appropriate services/courses • Support and buy-in among faculty to teach targeted practice and/or direct students to appropriate services/courses • Professional development and/or training provided to increasingly larger numbers of faculty and staff • Involvement of students as mentors, ambassadors or other roles to support engagement with targeted practice
Use of Evidence	<ul style="list-style-type: none"> • Common knowledge of key data points (e.g., improved student success rates for targeted practice) and impact of targeted practice on equity of student outcomes among different groups of students • Collection and use of data (qualitative and quantitative) to evaluate effectiveness of targeted practice and support expansion • Feedback loops between key stakeholders, senior leadership, faculty, and staff to inform targeted practice development and ongoing implementation • Use of student learning outcomes, where appropriate, to document effectiveness of targeted practice • Improvements to data infrastructure (e.g., integrating student services utilization with academic records)

Outcome Areas	Indicators
Institutionalization Strategies	<ul style="list-style-type: none"> • Identification of new staff and/or skills needed to scale and sustain targeted practice with requisite changes to faculty and staff recruitment procedures • Shifts in formal responsibilities of front-line administrators, staff, and key faculty • Early champions identified and empowered to lead change, address resistance and recruit new change agents • Resistance identified and strategies to address resistance are adopted and executed • Activities to scale targeted practice incorporated into existing decision-making processes • Common language to discuss targeted practice reflect institutional priorities rather than student “deficits” • Identification of revenue sources to scale and sustain targeted practice • Incorporation of scaling targeted practice into college strategic planning process • Connection of scaling process with accreditation
Networks	<ul style="list-style-type: none"> • External networks are developed and leveraged during the time of the grant: <ul style="list-style-type: none"> ○ Regular and systematic reflection on implementation and scaling progress among college leaders across hierarchical, departmental, and divisional categories ○ Engagement of senior leadership with state community college system office ○ Involvement of Catalyst Fund stakeholders, especially faculty and staff, in national reform initiatives ○ Additional funding to support scale and sustainability of targeted practice gained through network relationships