



THINKING BIG

A FRAMEWORK FOR STATES ON SCALING UP COMMUNITY COLLEGE INNOVATION

By Rose Asera, Rachel Pleasants McDonnell, and Lisa Soricone,
with Nate Anderson and Barbara Endel

JULY 2013



JOBS FOR THE FUTURE



JOBS FOR THE FUTURE

Jobs for the Future works with our partners to design and drive the adoption of education and career pathways leading from college readiness to career advancement for those struggling to succeed in today's economy.

WWW.JFF.ORG

JFF ON SCALING UP

Thinking Big, which focuses on statewide scale, is the first of a two-part exploration of scaling up. It covers a wide variety of issues that arise in the scaling-up process, from defining the problem to financing and sustaining successful initiatives. The second report will focus on how college presidents work to scale up innovation on their campuses.

In addition, a 2013 JFF policy bulletin, *Moving Forward: Strengthening Your State's Capacity to Bring Innovation to Scale*, is designed to help states create a policy climate ready for change. Focusing on three states in JFF's Postsecondary State Policy Network, it describes basic steps a state needs to consider as it prepares to pursue a student success agenda across all its community colleges.

ABOUT THE AUTHORS

Rose Asera is an independent researcher and evaluator. She was a Senior Scholar at the Carnegie Foundation for the Advancement of Teaching from 2000 to 2010 and directed the foundation's project, Strengthening Pre-collegiate Education in Community Colleges. As director of research and evaluation at the Charles A. Dana Center, she worked with the director, Uri Treisman, both at the University of California at Berkeley and The University of Texas at Austin. In 1991-92, Dr. Asera was a Fulbright Scholar at the Institute of Teacher Education at Kyambogo in Kampala, Uganda.

Rachel Pleasants McDonnell is part of JFF's Building Economic Opportunity Group, where she provides management and research support for Accelerating Opportunity, a national initiative to redesign Adult Basic Education programs and policies at state and institutional levels to substantially increase the number of adults who can earn a GED and a credential and enter the workplace with competitive skills.

Lisa Soricone serves on JFF's Building Economic Opportunity Group, helping low-skilled adults advance to family-sustaining careers, while enabling employers to build and sustain a productive workforce. Her work supports the evaluation of the success of programs that help adults succeed in community college, including Accelerating Opportunity and the Adult Completion Policy Project, an extension of the Breaking Through initiative.

ACKNOWLEDGEMENTS

The authors would like to thank the many individuals who participated in and assisted our research. We are grateful for their willingness to share their experiences and insights into the process of scaling. These include several JFF colleagues: Richard Kazis, Gretchen Schmidt (formerly Assistant Vice Chancellor for Academic and Student Services, Virginia Community College System), and Lili Allen.

Special thanks to these evaluators, state leaders, and college leaders:

Evaluators

Davis Jenkins, Senior Researcher, Community College Research Center, Teachers College, Columbia University

Robert Johnstone, Senior Research Fellow, The Research & Planning Group for California Community Colleges

Brandon Roberts, President, Brandon Roberts + Associates, LLC

State Leaders

Keith Bird, Chancellor Emeritus, Kentucky Community and Technical College System

Cynthia Ferrell, Associate Director of Student Success Initiatives, University of Texas at Austin

Mimi Maduro, Statewide Director, Oregon Pathways Initiative

Joe May, President, Louisiana Community and Technical College System

Israel Mendoza, Former Director, Adult Basic Education Office, Washington State Board for Community and Technical Colleges

Karon Rosa, Director, Arkansas Career Pathways, Arkansas Department of Higher Education

Susan Wood, Vice Chancellor for Academic Services and Research, Virginia Community College System

Karen Wheeler, Associate Vice Chancellor, University of Arkansas, Little Rock; formerly Associate Director for Academic Affairs, Arkansas Department of Higher Education

Jan Yoshiwara, Deputy Executive Director for Education, Washington State Board for Community and Technical Colleges

College Leaders

Sheila Quirk-Bailey, Executive Director of Planning and Institutional Effectiveness, Harper College, Palatine, Illinois

John Downey, President, Blue Ridge Community College, Weyers Cave, Virginia

Kenneth Ender, President, Harper College, Palatine, Illinois

James Jacobs, President, Macomb Community College, Warren, Michigan

Ann Kress, President, Monroe Community College, Rochester, New York

Regina Peruggi, President, Kingsborough Community College, Brooklyn, New York

Sanford Shugart, President, Valencia Community College, Orlando, Florida

Cheryl Thompson-Stacy, President, Lord Fairfax Community College, Warrenton, Virginia

Unless otherwise indicated, all quoted material in *Thinking Big* comes from interviews with these individuals.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	vii
INTRODUCTION	1
THE ARC OF SCALING: STATEWIDE PROGRAMS	10
THINKING AT SCALE: LESSONS LEARNED	34
CONCLUSION: EXTENDING THE CONVERSATION	38
APPENDIX I. WHAT THE LITERATURE SAYS ABOUT SCALE IN EDUCATIONAL INNOVATION	40
APPENDIX II. THE ARKANSAS CAREER PATHWAY INITIATIVE	48
ENDNOTES	54
REFERENCES	55

EXECUTIVE SUMMARY

It is a truism of American social policy that our nation has great success generating innovative programs that improve outcomes for participants—but that we are far less effective at moving from small, “boutique” programs into broadly applied solutions that improve the prospects of large numbers of individuals. This is certainly true in the education and workforce fields. Given this history, it is no surprise that the challenge of “getting to scale” is a growing preoccupation among educators, policymakers, and funders who are impatient with the pace of change and of the limited adoption of effective practices and programs.

We at Jobs for the Future are not the first to tackle the question of scale. We felt the need, though, to undertake our own inquiry and craft our own assessment of how to think about scale and to specify a framework that could be useful to both policymakers and practitioners. JFF has over two decades of experience designing and implementing scaling-up strategies to expand educational and economic opportunity for low-income youth and adults. We have learned from our work, and we wanted to systematize and further develop our thinking.

Starting from our organizational experience, we also mined the extensive research literature on scale and sustainability. Most important, though, we tested our emerging framework by examining efforts designed to spread, across entire state community college systems, evidence-based innovations that improve outcomes for students. We looked in depth at efforts in Arkansas, Oregon, Virginia, and Washington state (see box, “*Four Examples of Scaling Up Community College Reform*” on page viii) and interviewed key policy and practice entrepreneurs, college and system leaders, and experienced evaluators of community college initiatives, in Florida, Illinois, Kentucky, Louisiana, Michigan, New York, and Texas.

Based on the literature and the states' experiences, we have produced a definition of scaling up and of the conditions for its success and sustainability. We have identified distinct phases of scaling up, from initial planning to institutionalization and sustaining. Our goal is that the framework offered here helps innovators be deliberate and strategic from the outset, increasing the odds of successful expansion, impact, and sustainability.

Four Examples of Scaling Up Community College Reform

The Arkansas Career Pathways Initiative, administered by the Arkansas Department of Higher Education at 25 sites, including all 22 community colleges in the state, serves custodial “working poor” parents who are eligible for or receiving TANF funds. Over 27,000 students have participated in Career Pathways, with over 24,000 certificates and degrees awarded.

The Oregon Career Pathways Initiative, coordinated by the Oregon Department of Community Colleges & Workforce Development, has been scaled up to Oregon’s 17 community colleges. The goals are to increase the number of Oregonians with certificates, credentials, and degrees, and to ease transitions across the education continuum and into employment. More than 350 career pathway road maps have been developed; over 240 Career Pathway Certificates of Completion are offered statewide. Since 2008, students have earned more than 5,000 short-term certificates.

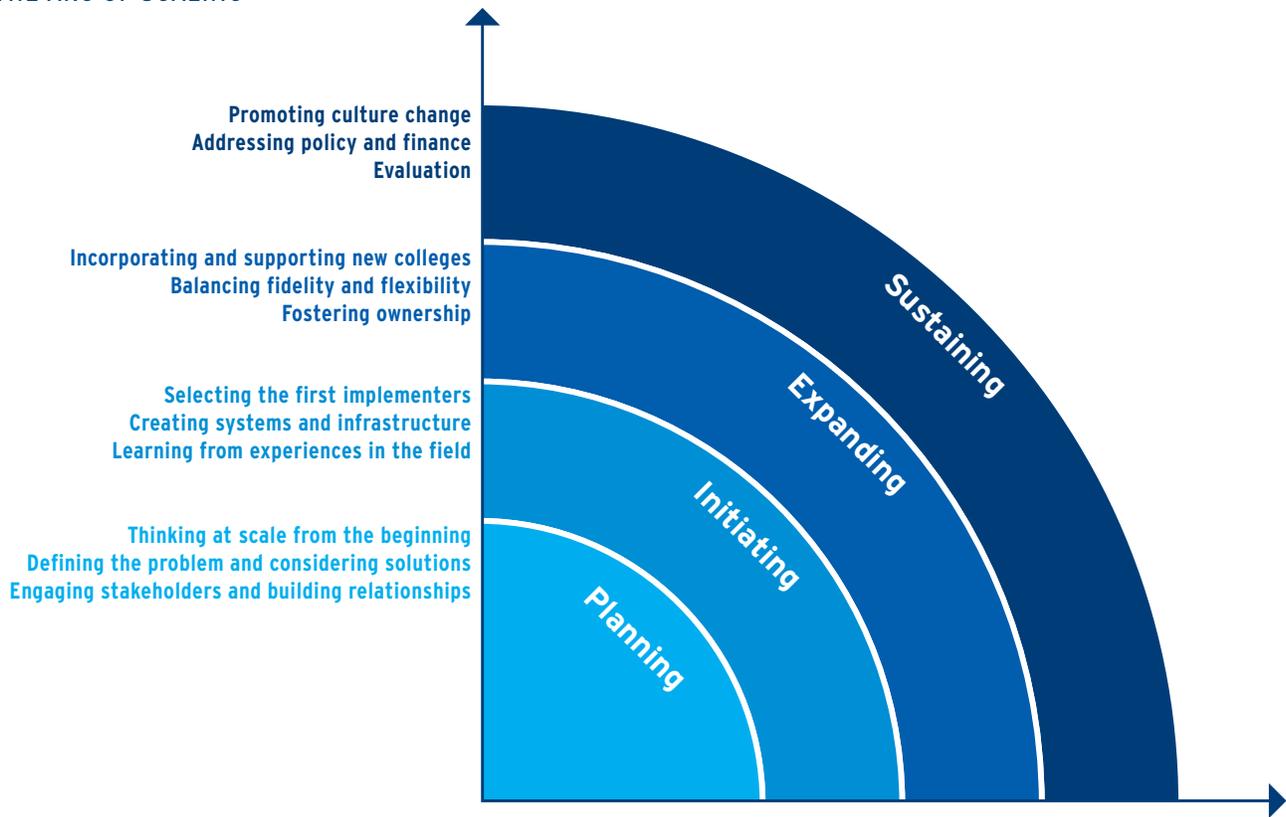
The Virginia Community College System’s redesign of developmental education has led to change across the entire system of 23 colleges and 40 campuses, enrolling a total of 280,000 students.

The Washington State Board for Community and Technical Colleges’ Integrated Basic Education and Skills Training (I-BEST) program accelerates the progress of Adult Basic Education students by combining basic skills education with occupational training. The program is in all 34 of the system’s colleges, with 163 programs and over 3,000 students participating annually.

THE ARC OF SCALING

Scaling up is an ongoing process, with distinct phases. While each statewide scaling-up initiative is unique in content and context, all share an arc that begins with preparation and planning, then moves into initiating and expanding, and then comes to sustaining, with changes in practices and norms.

THE ARC OF SCALING



PREPARATION AND PLANNING

The groundwork for scaling up an innovation takes place before the first student enrolls in a new program. The first step in scaling is identifying an innovation to test and scale that addresses an identified need. Once the innovation has been selected, effective planning for scale requires thinking systemically and systematically even if a program is only being piloted in a few colleges. It takes into account the complexity of the change process, considers strengths, and anticipates obstacles, resulting in a nuanced understanding of the system and landscape, a clearly defined problem, and a potential solution.

INITIATING

The next step is to identify and engage likely colleges for initial implementation. Central office leaders create guidelines, organize data systems, and build pathways for communication, while the actual work of program development—refining and adapting the model—takes place at the colleges. Those involved with the program at the state and local levels systematically learn from early experiences in the field thru data analysis and stakeholder feedback, then refine the model and prepare it for further expansion.

EXPANDING

The third stage is expanding—bringing more colleges into the network and expanding the program at each college. Lessons learned from initiating help the second or third wave of colleges get started. Building on the system capacity developed during the initiating phase, the central office supports the new colleges, incorporates them into structures set up for collaboration and peer learning, and orients them to the guidelines, systems, and structures in place. The model evolves as more colleges adopt the reform.

SUSTAINING

The act of sustaining is dynamic, requiring both continuity and flexibility. Without the novelty or excitement of start up, sustaining relies on changing the norms of practice and keeping successes visible. The strategies and activities that brought a program to scale—such as professional development, communication, and peer learning—need to be ongoing to sustain it. Professional development, communication, and the network of practice all continue.

LESSONS LEARNED

Even as the system context and innovations vary, the state experiences examined in our research revealed a set of consistent themes and lessons.

The strongest message from state systems and colleges is the need to think and work toward scale from the beginning—from the top down, the bottom up, and through the middle. The vision of scale—in terms of proportion of the target population to be reached, expansion strategy and timeline, and fiscal sustainability—has to drive planning and implementation from the outset.

In the state systems studied by JFF, the entrepreneurial leaders articulated and were guided by a clear, definable vision of scale. They anticipated and prepared for responses from their peers, their subordinates, and their various stakeholders, whether enthusiastic or skeptical. Some started by introducing changes across the entire system; in others, the state strategically selected a diverse set of pilot institutions and then expanded based on evidence and experience. In each, planning began with a discussion of assumptions about scale and how to assemble the human, political, and financial capital needed to implement innovation at the desired scale and scope.

Large-scale innovations invariably require engagement across systems—K-12 and higher education; workforce and economic development; community-based supports and college-based academics. Large-scale problems do not respect system boundaries; effective solutions often engage multiple agencies and cross structural and cultural barriers. Because of this, planning for scale requires careful attention to communication and buy-in strategies and to the building of strong, motivated

partnerships, collaborations, and relationships across institutions and systems. The initiatives studied for this report invested heavily in the professional networks, individual relationships, and institutional partnerships that provide the social capital critical to growth and broad adoption of reform.

As efforts to scale up innovation grow and mature, the challenges shift. As an innovation is scaled, leaders must grapple with the need to balance fidelity to the model as designed with the reality that local conditions frequently demand adaptation if an innovation is to take root. They must turn from the challenge of assembling development capital and of driving innovation to the proposed scale to the equally important challenge of ensuring ongoing resources to sustain new practices at the expanded scale and scope. States and systems must creatively braid together existing funds, but also identify long-term sources of funding and commit to pursuing cost-effective ways of sustaining innovation.

Throughout the scaling-up process, effective use of student data is critical: initially, to make the case for reform and for the particular strategy; later, as a tool for feedback and formative evaluation and for continuous program improvement and midcourse corrections; and ultimately, as evidence of impact to policymakers and participants.

Finally, the experience of states included in our research reminds us of how complex the change process always is. And it reminds us that ongoing focus and engagement are critical during all stages of the arc of scaling.

INTRODUCTION

To work at scale, colleges have got to impact a significant issue or a significant number of people. The bottom line is that scale means impact.

–Keith Bird, Chancellor Emeritus, Kentucky Community & Technical College System

Large number of students dropping out of high school, high remediation rates among community college students, and low college completion rates—these are among the large-scale problems plaguing American education, and they demand large-scale solutions. The public says so. Local, state, and national governments say so. Our mission as educators in a democratic society says so.

As a result, “getting to scale” is the watchword, among educators, policymakers, funders, and, indeed, anyone involved in education reform. The goal is clear, but the process is not. What does it take to scale up best practices effectively and achieve maximum impact?

Thinking Big examines the ways in which community college systems, such as governing or coordinating boards and community college associations, can drive system-wide scale-up efforts. Jobs for the Future prepared this report, looking on the ground at community college systems that have effectively moved to scale, to explore the topic

As a result, “*getting to scale*” is the watchword, among educators, policymakers, funders, and, indeed, anyone involved in education reform. The *goal* is clear, but the process is not. What does it take to *scale up* best practices *effectively* and achieve *maximum impact*?

of scale and provide insight and guidance on how it can be achieved. Like many nonprofit organizations, JFF places a high priority on developing scalable models for high school, community college, and workforce development reform. JFF has been deeply engaged in scaling up educational models, through such efforts as the Early College High School Initiative and Breaking Through/Accelerating Opportunity. Given our awareness of the challenges associated with scaling up, we feel a compelling need to look much more deeply on what it takes to get to scale.

We recognize that getting to scale means overcoming a number of challenges, not the least of which is convincing large numbers of people to do things differently. Resistance to change is common in all areas of life, not just education. Higher education also has a long history of valuing autonomy, so shared efforts or importing an existing model may go against the grain. In addition, programs operating at a broad scale often cross structural and cultural barriers. In higher education, state and campus programs have their own internal practices and procedures and are often unaware of related activities in other departments, programs, or colleges. Governance structures, intra-agency relationships at the state and local levels, and relationships between state agencies and the colleges all affect the likelihood that scaling up will succeed. Many of the efforts highlighted in *Thinking Big* bridged previously unconnected systems, such as adult education and community colleges, and convinced them not only to work together but to do so in a consistent manner across multiple campuses. And we cannot ignore the fact that scaling up requires large investments of time, money, and human resources, most of which are in short supply in the education field.

JFF is not the first organization to tackle this complex subject, nor do we expect this report to have the last word on scaling. What distinguishes this report is that we examined both the academic literature on scale and conducted our own field research. We looked at a range of examples across multiple contexts and identified the cross-cutting insights and lessons that apply to the field as a whole. We talked with the people who drive scale-up efforts and learned from them how the process unfolds. We learned about the journey from idea to pilot to statewide scale, as well as the important landmarks along the way.

This report focuses on scaling up community college reform—using the state community college system as the unit of analysis—given JFF’s focus on these institutions and their critical role as gateways to postsecondary education and training. Community colleges, with their mission to serve all students, need strategies that will help expand the impact of effective practices to better meet the diverse needs of their students. However, the principles explored here should be relevant to K-12 systems, four-year colleges, and workforce development initiatives—in particular, the idea of thinking at scale from the beginning.

WHAT DOES JFF MEAN BY SCALE?

Prototypically, as an evaluator, in our world they're asking how many students have been served. That's not a bad definition [of scale], but it is limiting. Most often, the word scale in our lexicon defaults to counting how many, but measuring the impact of something and attempting to understand the component pieces of the impact are also critical features of scale.

—Rob Johnstone, Senior Research Fellow, Research and Planning Group for California Community Colleges

Jobs for the Future has adopted a multifaceted definition of scale, building on the work of scholars such as Cynthia Coburn (2003). At its most basic, scale is about increasing the overall impact of an innovative program or practice so that it reaches a significant proportion of the target population. Getting to scale extends the reach of a solution to meet the magnitude of the problem. It is an ongoing process that starts before any students are enrolled and continues beyond reaching the outcome targets.

And it is also about putting in place systems and funding structures that help sustain an innovation in the long term. While scale can be measured in terms of student outcomes, the success of any scale-up effort should include systems-level outcomes.

On the path to achieving scale across a state, we see change taking place along two essential dimensions. One dimension is institutional scale: increasing a college's capacity to serve a significant proportion of the target population. The other—and our focus in this report—is statewide scale: expanding the model to more campuses.

It is important to note the distinctions and similarities between scale and scaling up. These terms are often used interchangeably, but they have different meanings. In JFF's view, scale—the end goal—must be determined during the planning phase of an initiative, and it must take into consideration the scope of the problem being addressed, the size of the target population, and the student and system level outcomes desired. Scaling up is the process of getting to that end goal. Even though the various initiatives detailed in this report had different goals for what scale would ultimately look like, they all shared certain elements in terms of the process used to get there.

At its most basic, scale is about *increasing the overall impact* of an innovative program or practice over time so that it *reaches* a significant proportion of the target *population*.

WHY JFF DEVELOPED THIS REPORT

Jobs for the Future is committed to doubling the number of low-income youth and adults who attain postsecondary credentials, and innovation in the world of community colleges is central to achieving that goal. JFF has long recognized the need to move beyond boutique programs that improve outcomes for a small number of students at a small number of community colleges—indeed, a core component of JFF’s mission is to support and advocate for the wide-scale implementation of tested models. To change the lives of large numbers of community college students—that is, to raise completion rates significantly—system change must be part of the innovation. In many cases, a sustainable, cost-effective way to reach many colleges is to use the state system as a vehicle for reform. A single community college may increase the numbers it serves, but state systems can improve outcomes for many more students, and they can ensure that systemic and culture changes sustain innovation.

As a *catalyst for change*, bringing innovative programming to the colleges and the states, and as an *intermediary*, connecting various groups to resources, expertise, and one another, JFF has been able to greatly increase the impact of successful educational practices and models. The Early College High School Initiative, which began in 2002, has led to the founding or redesign of over 240 schools across the country. Tens of thousands of early college students are completing college coursework in high school, saving time and money toward earning college credentials—particularly minority and low-income youth. Evaluations show that the schools have graduation rates 8 percentage points higher than the district average, and that 77 percent of graduates go on to some form of postsecondary education. JFF works with states and districts to expand the reach of this model. North Carolina, for example, now has 71 early college high schools. The Pharr-San Juan-Alamo Independent School District in Texas has expanded the model districtwide.

JFF also guides the scaling up of its Breaking Through initiative, which began in 2004 as a demonstration project in which community colleges experimented with strategies to better serve low-skilled adult learners. Over the next five years, the initiative, a collaboration with the National Council for Workforce Education, grew to over 40 colleges across the country, including six tribal colleges. In 2009, JFF used the best practices garnered from Breaking Through and, by integrating them with the Washington State I-BEST model, created the Accelerating Opportunity initiative. Now, JFF works with eight states to scale up integrated pathway models for Adult Basic Education students, enabling them to simultaneously earn marketable credentials and increase their academic skills. The combined networks of Breaking Through and Accelerating Opportunity now include nearly 100 colleges across the country.

In Accelerating Opportunity and many other initiatives, JFF assists state leaders as they frame critical issues and consider and design solutions. Together, we explore how a state uses research, technical assistance, and peer learning opportunities to move forward across colleges in a focused way. Often, we bring people together to help them explore issues, but the key is that state and local leaders, policymakers,

and practitioners determine what to do. They live the change. For this reason, *Thinking Big* features on-the-ground scaling efforts of state and institutional leaders, rather than JFF's experiences as an intermediary. Our goal is to draw on our state partners' experience in practice and policy to establish a common framework and understanding of the concept of scale. In that way, the field can better support both state systems and colleges as they pursue goals to increase the number of students who earn college credentials.

This report, the first of a two-part exploration, looks at statewide scale. The second will examine how college presidents pursue scale on their campuses. We intentionally consider state and institutional scale, rather than national scale driven through a national initiative. We wanted to understand how states and institutions can push for scale in the absence of an external initiative and its grant funding. In addition, as JFF has found, even within a national initiative, each state and college must go through the processes described in this report. Partnering through a national initiative adds leverage, yet states and colleges find that participation is not essential to scaling up what works.

THE PROCESS OF DEVELOPING THIS REPORT

In preparing *Thinking Big*, JFF reviewed the literature on scaling up, starting with seminal pieces such as Richard Elmore's *Getting to Scale with Good Educational Practice* (1996) and Cynthia Coburn's *Rethinking Scale: Moving Beyond Numbers to Deep and Lasting Change* (2003), as well as the literature on diffusion of innovation. (See *Appendix I* for an introduction to the literature about scale.) Indeed, we found valuable discussions on defining and framing scale in ways that go beyond numbers.

We also found that the literature tends to address four main questions: What does scale look like? What makes an innovation scalable? What institutional qualities support and promote scale? And what processes exist for getting to scale?

While we found a range of *useful ideas, excellent theory, and in-depth research*, the literature has lacked a comprehensive description of the overall process of scaling up. We thus *identified a need* for a description of the on-the-ground process of scaling up—the players and procedures involved, and even what *scaling up* looks like as the process *moves forward*.

Coburn's dimensions of scale—spread, depth, ownership, and sustainability—were particularly useful in answering the first question, and helped frame how we approached this report. We found valuable theoretical thinking on what types of innovation should be scaled up (e.g., those that do not depend on context; those that are financially viable at scale) and what institutional characteristics (e.g., data capacity; openness to new ideas) are more likely to support and promote scale. Researchers have suggested important contributors to scaling, such as involving teachers to effect change in the classroom, adapting educational models to local circumstances, and sustaining innovation.

While we found a range of useful ideas, excellent theory, and in-depth research, the literature has lacked a comprehensive description of the overall *process* of scaling up. We found little practical guidance for states and institutions on what it means to think at scale. And while researchers have documented how specific initiatives got to scale, the lessons are often specific to a particular context or program. We thus identified a need for a description of the on-the-ground *process* of scaling up—the players and procedures involved, and even what scaling up looks like as the process moves forward. We sought to look across initiatives and contexts to identify cross-cutting themes and describe a process that could work across them. We also wanted to leverage JFF's network of innovators and tap into the insight and experiences of the leaders in the field.

To answer our questions about how scaling happens in institutions and across institutions in states, JFF staff interviewed 22 leaders of educational innovations, including community college systems heads and the directors of statewide initiatives, as well as evaluators who have been closely involved with scaling-up projects. (See *the acknowledgements for a list of interviewees*.) The interviewees are leaders in Arkansas, Florida, Kentucky, Louisiana, Oregon, Texas, Virginia, and Washington State, and they all have been directly involved in expanding innovative practices across colleges and systems.

In selecting interviewees, we targeted leaders who could see the big picture and could also navigate complex systems to engage stakeholders and mobilize actors throughout a large system. These leaders have many years of experience grappling with the question of how to promote large-scale change. They provided valuable insights and deepened our understanding of what it means to get to scale.

We analyzed the interview transcripts to identify common threads across the stories and compare what we heard with our review of the literature. In fact, the interviews echoed many of the themes from the literature, such as the need for capacity building, faculty engagement, and creating buy-in. Across the cases, we also identified distinct phases of scaling up, from initial planning to sustaining at scale. *Thinking Big* elaborates on these phases, using examples from the field to ground the framework in practice.

Of course, this study has limitations. First, any successful scaling effort includes more than just system or program heads, and no one person can know the whole story of how scaling up takes place across campuses. Second, this is not an exhaustive study. We identified cases that met our definition of scale. We focused on cases that had visibly reached all colleges in the state and been in existence a number of years. Also, they all had data on effectiveness and have participated in national conversations about workforce development or community college reform. We did not include efforts that had failed to reach scale, including those that engaged in efforts similar to the case studies.

EXAMPLES OF SCALING UP

The following brief stories of getting to scale are referenced throughout *Thinking Big*. In each case, scaling up has involved expanding a model to all colleges within a system as well as systems change at the state and college levels. Two of these center on career pathways, an integrated approach to workforce development that has been supported at local, state, regional, and national levels. The other two focus on Adult Basic Education reform and developmental education reform.

The Arkansas Career Pathways Initiative is a workforce development initiative administered by the Arkansas Department of Higher Education at 25 sites, including all community colleges in the state system. It serves custodial working poor parents who are eligible for or receiving TANF funds. With a student success rate that is 10 percentage points higher than average for the state's community college students as a whole, Career Pathways is one of ten promising programs selected to participate in Innovative Strategies for Increasing Self-Sufficiency, a national initiative sponsored by the U.S. Department of Health and Human Services, Administration for Children and Families, Office of Family Assistance. Over 27,000 students have participated in Career Pathways, with over 24,000 certificates and degrees awarded.

JFF selected this initiative as an example of scale because of the state's success in changing the way it serves TANF-eligible students at all colleges in Arkansas. Based on evidence of success, Career Pathways has become the primary program funded by TANF, with support from college presidents as well as the governor. In addition, the cross-agency partnerships required to make the initiative work have resulted in a cultural shift at the state level, with higher levels of collaboration across previously separated systems.

Appendix II is a more detailed case study of the Arkansas Career Pathways Initiative, showing the chronological and developmental process of scaling.

The Oregon Career Pathways Statewide Initiative was launched through Oregon's participation in the National Governors Association's Pathways to Advancement Initiative, with impetus from three colleges that were building local programs.

Beginning initially with 5 colleges in 2004, the initiative expanded to 11 colleges in 2006 and scaled up to all 17 colleges in 2007. It focuses on two goals: increasing the number of Oregonians with certificates and degrees; and easing transitions across the education continuum and into employment. To accomplish these goals, colleges redesigned entire course sequences to create comprehensive career pathways with multiple stackable credentials. To build capacity, understanding, and buy-in, statewide academies were held in 2005, 2007, and 2008, with teams attending from all 17 colleges and their partners. Leaders from the 17 locally controlled community colleges collaborated to develop the Career Pathways Roadmap, an open-source web-based tool. Collectively, the colleges have developed more than 240 Career Pathway Certificates of completion statewide in a variety of career and technical education programs, with competencies tied to jobs in the local labor market. Since 2008, more than 5,000 short-term certificates have been awarded statewide.

For Oregon, getting to scale meant systems change at the state and college levels. Even as a decentralized system, the state office created a framework that all colleges agreed on, as well as systems to manage data collection and professional development. College presidents have made and renewed statements of support for the initiative. Colleges reconsidered the ways that students would flow through the system. These changes will have a long-term impact on students.

While **Virginia's developmental education redesign** efforts are too new to have generated outcomes data, we highlight this case as a strong example of thinking at scale from the beginning. The Virginia Community College System is a centralized system, with all colleges under common policies, funding, and course system. When VCCS decided to redesign developmental education, it was clear that it would institute change across the entire system of 23 colleges and 40 campuses, enrolling a total of 280,000 students. Through a consultative process of task forces and design teams, the system as a whole decided to implement developmental mathematics as a series of one-unit modules and to integrate reading and composition in developmental English. The developmental redesign was the first stage of an ongoing process of system reengineering.¹

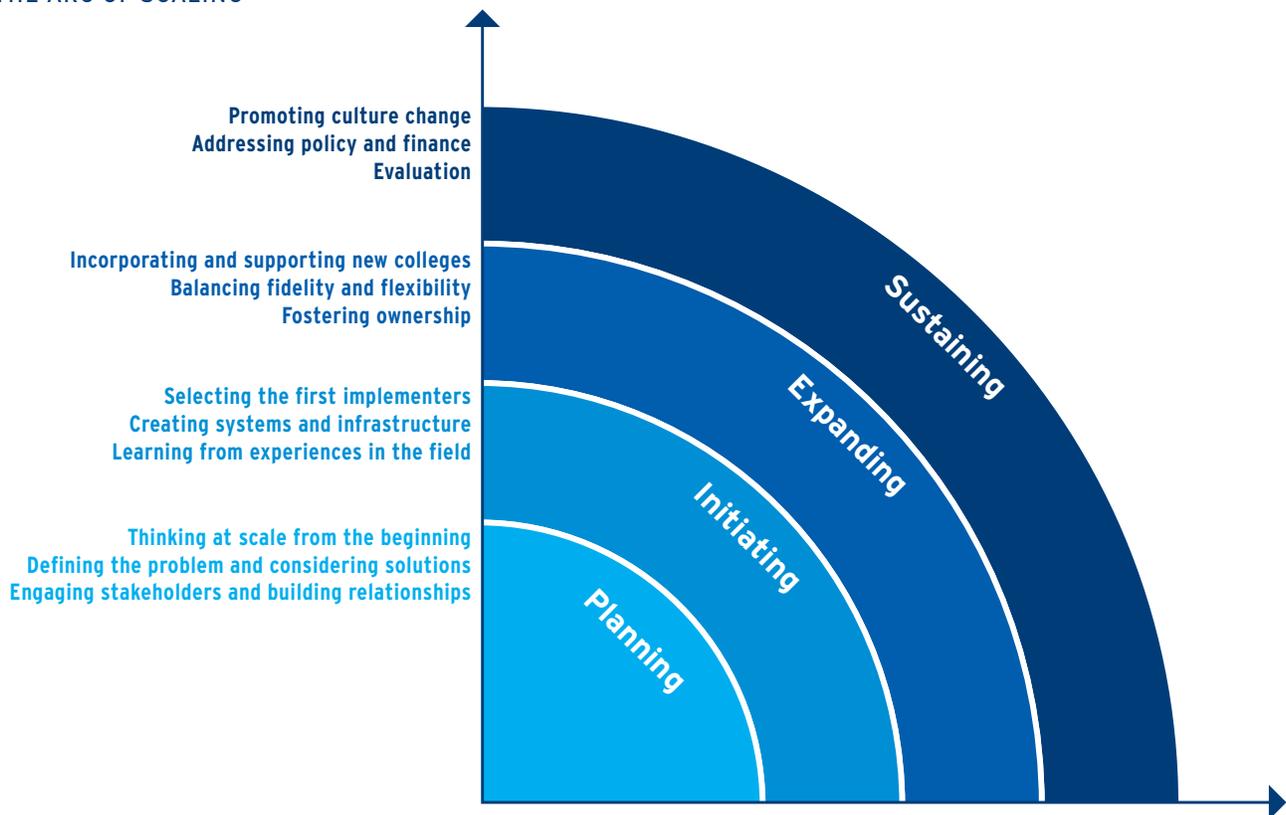
In 2005, the Washington State Board for Community and Technical Colleges launched the **Integrated Basic Education and Skills Training** (I-BEST) program to accelerate the progress of Adult Basic Education students. The I-BEST model combines basic skills education with occupational training, pairing two instructors in each classroom—one to teach technical or professional training content and the other to teach basic skills in reading, writing, math, or English. I-BEST students are nine times more likely to earn a credential as students enrolled in traditional basic skills programs. Today, the program is in all 34 of the system's colleges, with 163 programs operating around the state and over 3,000 students participating annually.

JFF selected Washington as an example of getting to scale in part because of its success expanding the I-BEST model to all of its colleges, but also because of the statewide culture shift that has occurred as a result. The colleges and the system office have changed the way they view Adult Basic Education students and faculty, and the concept of integrated instruction has now expanded into other parts of the colleges. In addition, Washington demonstrates how states can change policy and funding to support scale.

THE ARC OF SCALING: STATEWIDE PROGRAMS

JFF's interviews with state and college leaders reinforced the idea that scaling up is an ongoing process, with distinct phases. While each statewide scaling-up initiative is unique in content and context, all share an arc that begins with preparation and planning, then moves into initiating, followed by expanding, and concluding with sustaining, with a change in practices and norms. The arc represents the ever outward movement of an innovation as it is scaled to expand its reach throughout a system or set of colleges. Throughout this arc of scaling are common experiences and strategies, some of which span the entire process.

THE ARC OF SCALING



PREPARATION AND PLANNING

You cannot overestimate the resources that the innovation is going to involve and its ramifications on other systems.

–Keith Bird, Chancellor Emeritus, Kentucky Community & Technical College System

While scale is often visualized in numerical terms, the groundwork for a successful scale-up effort takes place before the first student enrolls in a new program, and possibly even before the explicit decision is made to scale up a particular program or strategy. The planning process is critical.

Effective planning for taking an innovation to scale requires thinking systemically and systematically. It also takes into account the complexity of the change process, which inevitably affects multiple departments and individuals. Whenever possible, planning considers strengths and anticipates obstacles.

Actions and strategies during the planning process include:

- > Thinking at scale from the beginning;
- > Defining the problem and considering solutions; and
- > Engaging stakeholders and building relationships.

THINKING AT SCALE FROM THE BEGINNING

When you build with scale in mind at the beginning, it forces you to think about what implementation will look like everywhere, not just in one place. You think through implications for practice, policy, and structure from the onset.

–Gretchen Schmidt, former Assistant Vice Chancellor of the Virginia Community College System²

Bringing educational innovations to scale within state systems is not a haphazard process. While movement to scale can happen virally, much more often it demands attention and intention. Leaders need to consider the structures and policies required to implement an innovation, as well as issues of ownership, accountability, and financing. In our state cases, scale was the end goal from the onset, with leaders thinking at scale from the beginning and intending to create solutions that could serve large numbers of students across many campuses.

An important part of thinking at scale is deciding what to scale up. The research suggests that possible interventions should be considered in terms of whether they are likely to have the desired impact, and what it would take to implement and sustain them at scale.³ System leaders use a combination of evidence and experience to make a judgment call on whether an innovation is scalable.

For an effective scaling-up strategy, the leaders of state systems and programs need a robust understanding of both the system itself and the broader educational and political landscape. They must understand how the proposed innovation fits

into the bigger picture of system goals and priorities. This includes identifying strong institutions or individuals to work with and knowing how to frame invitations and incentives for participation. Those leading the effort, such as community college system administrators or leaders of a community college association, must understand the system architecture and strategize around the existing configurations. Taking the long view, they must envision subsequent waves of both spread and refinement, even before the first students enroll.

Keith Bird, former chancellor of the Kentucky Community & Technical College System, has a set of terms that he thinks are applicable to scaling up any new broad change or initiative: systemic, strategic, sustainable, scalable, and synergistic. The “5 S’s” help system staff evaluate the scale-up potential of new initiatives, and they help college leaders ensure that changes yield a positive return on investment. Bird uses this framework to guide scale-up efforts because, he notes, “you can go off in different directions when you are starting something new.”

How Governance and Systems Structures Affect Scaling

Because governance structures play a major role in a scale-up initiative, leaders need a good understanding of their political landscape in order to devise effective strategies. This includes both official governing structures and “unofficial” ones—the relationships and degree of influence across state agencies.

While achieving scale is possible in any state, it is often easier in those with more centralized control. Each state highlighted in this report has a different governance structure; some are highly centralized, others more decentralized. No matter what context they work in, in order to drive scale, leaders found the good balance of policy and persuasion. They considered the relationship between the college and the system office, who had influence at multiple levels, and what approaches would work best given system culture. Where possible, they used or mimicked existing structures (like quarterly meetings) to their advantage.

The most effective approaches to statewide scale also vary depending on how the state’s community colleges, adult education, workforce systems, and other state agencies are organized and governed. Those wishing to make systems change must take such factors into account and develop strategies accordingly. Whether the impetus for innovation comes from within or outside of these state agencies, their support is essential to creating sustainable change.

Different governance systems have different approaches to allocating decision-making authority, regulatory authority, and funding authority. In addition, some states have a single entity that governs all public colleges (both two-year and four-year institutions), while in others a separate entity has authority over each; some states lack any specific governing body to oversee a state system of colleges. System culture also varies, with some states placing more emphasis on centralized planning and uniformity across colleges, while the more decentralized states emphasize college autonomy.

How Governance and Systems Structures Affect Scaling (continued)

Across the 50 states, Aims McGuinness (2003) has identified 18 distinct structures for overseeing higher education. Possible community college governance structures include governing, regulatory, and planning boards:

- > **Governing boards** have the highest level of authority, covering such areas as strategic planning, budgeting and resource allocation, evaluation of institutional leadership, setting and implementing policy, and ensuring accountability. Alaska, Idaho, Montana, and Utah, for example, have a single governing board that oversees both community colleges and universities. In North Carolina and some other states, a separate board governs community colleges (McGuinness 2003).
- > **Regulatory coordinating boards** have authority over program approval and academic policies. For example, Washington and Virginia have two levels of coordinating board, one for all public postsecondary institutions and another specifically for community colleges. Arkansas has one state-level coordinating board, while an institutional-level board governs each college. Oregon places locally governed colleges under one state-level coordinating board, with a separate governing board for universities (Bumba 2002; McGuinness 2003).
- > **Planning/advisory boards** only have authority to review and make recommendations about programs, policies, and budgets. In Michigan, for example, a planning/regulatory state agency has limited authority while each community college has its own governing board (McGuinness 2003).

The nature of the state system has implications for scaling up an innovation. As leaders of the innovation move forward, they need to consider a number of areas related to governance:

- > Which state-level entities and college associations can influence the behavior and policies of colleges? How can these entities support or hinder the scaling process?
- > Which state-level entities and college associations need to be involved in the process? At what point in time?
- > Who might be a champion within governing and other state bodies?
- > How do state governing bodies relate to college presidents and faculty associations?
- > How is information about innovation communicated? Does it go from a governing body to the colleges or to others leading the change to the governing bodies? Who needs to know what, when?
- > Looking back in your state, when have top-down or bottom-up efforts worked? When have policy and the governing body played a useful role?

In the case of the developmental education reform in the Virginia Community College System, state leaders knew that innovations would be implemented at every institution, and they planned with that in mind. In Washington State, adult education and community college system leaders had the eventual scale up of I-BEST in mind from the beginning. Leaders first sought to fund pilots at 10 colleges, so that all 34 colleges in the system would pay attention to the program rather than perceive it as marginal. Other colleges would take note and see that colleges “like them” could implement the program.

The Oregon Career Pathways Initiative began with 5 colleges, but the intention from the beginning was to bring a systems approach to all 17 colleges. Initial funding from the Governor’s Employer Workforce Training Fund launched the collaboration, followed by funding through the Oregon Department of Community Colleges and Workforce Development. As a result, Oregon Pathway Academies in 2005 and 2007 involved the 17 colleges and led to Career Pathway Action Plans at all of them, even before funding was available. Moreover, since 2004, the Oregon Pathways Alliance, bringing together the leaders of the 17 community colleges, has been meeting quarterly and advancing a key goal: peer learning and sharing of promising practices and lessons. According to Mimi Maduro, Statewide Director at the Oregon Pathways Initiative:

We were thinking system level from day one. Even though there were initially five colleges, we involved the other twelve state community colleges in the academies. The other colleges brought teams to the academies and developed action plans. They were part of the learning community, even though they didn’t yet have pilots or funding.

DEFINING THE PROBLEM AND CONSIDERING SOLUTIONS

If you want it to stick, it has to be a problem they see—to do the hard work of change to implement the innovation, people have to believe they are doing something that matters.

—Jan Yoshiwara, Deputy Director, Washington State Board for Community and Technical Colleges.

For innovation to take root, it has to fill a recognized need and connect to the institution’s mission and ongoing work. People working in the system must feel a desire to make change, and the innovation must have a clear purpose and provide clarity on what it will accomplish (Elmore 1996; Cordingley & Bell 2007). The sense of need may be stimulated by any number of factors—external policy, internal discontent, data that demonstrate room or need for improvement—but it must be accompanied by

*For innovation to take root,
it has to fill a recognized need
and connect to the institution’s
mission and ongoing work.*

willingness to change. In the initial planning stages, stakeholders need to acknowledge and agree on the definition of the problem before they can identify a potential solution. This is critical: It can be tempting to scale up almost any success, but innovation is unlikely to succeed broadly unless it addresses an agreed-upon problem. In some cases, the choice may be to implement an existing solution, such as replicating a small program already in place or a strategy that another state uses well.

In the initial planning stages, stakeholders need to acknowledge and agree on the definition of the problem before they can identify a potential solution.

The ideal would be to identify an existing model that is supported by data demonstrating its effectiveness, but this is seldom an option. Frequently, no proven effective model exists, and the planning process entails generating a vision of how the problem could be addressed. Ultimately, leaders must draw on a combination of evidence and experience to determine the innovative model or practice to be scaled.

Joe May, president of the Louisiana Community and Technical College System, believes that to implement systemic change, “leaders need a clear public agenda and then must be able to tie it to institutional mission and vision and really engage people so they understand and can articulate the problem and see themselves as part of the solution.” The story, says May, should convey “what needs to be changed and why. [And] it has to be so compelling the audience must feel a sense of outrage and must feel compelled to act.”

Taking this approach in Louisiana, May pointed out an unintended consequence of funds intended to help adults earn GEDs: Schools, seeking to improve their overall performance on standardized tests, actually used the funds in ways that encouraged students to drop out of high school. This story, grounded in data, served as a powerful vehicle for communicating not only a need but also a potential solution. He proposed the state move adult education from the K-12 system to the community college system and reorient services to focus more on work readiness and sustainable employment.

Data offer a powerful resource for “naming” the problem and making the case for change, and community college system offices are well situated to gather, analyze, and disseminate data. For example, data showing low pass rates for developmental courses in Virginia community colleges made it clear that the status quo was not serving students well. Chancellor Glenn DuBois stated the problem in unambiguous terms: “We can’t keep doing the same old thing” (Asera 2011). VCCS then launched the Developmental Education Task Force to begin developing a solution. There may be reluctance among leaders in some situations to publicize data that reflect poorly on a system or institution, but understanding and communicating the nature and depth of the problem are essential to determining and scaling up solutions.

In Washington State, a review of data by the State Board for Community and Technical Colleges revealed poor success rates for low-skilled, low-income students: Few of them were getting into college, and even fewer were obtaining the college credentials needed for success in the labor market. At the same time, research undertaken by SBCTC with the Community College Research Center showed substantial earnings benefits—over \$2,000 annually—for Adult Basic Education students who took at least one year’s worth of college-credit courses and obtained a credential (SBCTC 2005). Yet less than 5 percent of ABE and ESL students ever hit this milestone. The data demonstrated a clear need to help ABE students succeed in community college, which would both promote their economic advancement and improve the state’s economic competitiveness. SBCTC validated the data with administrators and faculty across the state and then, with colleges playing an active role, began considering solutions. Among those was the possibility of accelerating adults’ learning by integrating basic skills development with occupational training—the innovation that grew into I-BEST.

Reliable data frame the problem from the beginning and lay the groundwork for ongoing evaluation. Moreover, numbers that demonstrate need also help make it possible to measure change over time. Ongoing data collection and analyses reveal overall patterns, although other types of information, qualitative as well as quantitative, can be resources for describing the long-term effects of a new practice.

ENGAGING STAKEHOLDERS AND BUILDING RELATIONSHIPS

You have to develop leadership and organize agreement on the broad goals of the initiative, engage people in the process, and then take the resources you have and try to steer them in the direction you want to go.

—Davis Jenkins, Senior Researcher, Community College Research Center

Systems and colleges are made up of people, and relationships among the partners and participants often provide a background for conversations that lead to action. Throughout the scaling-up process, effective leaders build relationships. They engage stakeholders at multiple levels, from state policymakers, to college trustees and presidents, to the faculty and staff who will change their behavior to affect students directly. Individuals at these different levels can offer support and inform implementation as they help validate the problem, propose solutions, and anticipate and reduce barriers to implementation and scaling up.

Even when change comes from the top, stakeholder engagement is critical to success. Virginia is a centralized system, with common policies, central funding, and master course descriptions. However, that does not mean the system has a license to move by mandate, says Gretchen Schmidt of her experience as assistant vice chancellor for academic and student services at VCCS:

There is no stick big enough to make everyone act. You need to build relationships and trust. You can't force institutional leaders to engage in structural reform. And the central office has even less leverage with faculty, who have to trust you if they are going down the road with you.

As a centralized system, Virginia's chancellor and central office staff have built an extensive consultative system of councils to get regular input from presidents, vice presidents, deans, and faculty. The councils also serve as vehicles for disseminating information to all levels of the system. For the developmental redesign, VCCS organized additional groups: the Developmental Education Task Force, two redesign teams (one for developmental math and one for English), and two curriculum teams, as well as leveraging standing councils including the Advisory Council of Presidents and the Academic and Student Affairs Council, which consists of academic and student affairs vice presidents.

Some researchers have pointed out the importance of how messages about the need for change and the innovation as a solution are conveyed, as well as the need to make clear how the solution will benefit those it targets (Cordingley & Bell 2007; Bloom & Chatterji 2008). In Louisiana, Joe May uses storytelling not only to define the problem but also as part of a systematic approach to building broad stakeholder support for system-wide innovations. Over a period of months, he meets with a range of internal and external stakeholders: college presidents, faculty, and staff (often in groups), as well as influential citizens, possible financial supporters, and, finally, legislators. When he meets with stakeholders, he uses stories of specific students or employers to demonstrate the need for reform.

In designing career pathways and organizing workforce development education for low-income students at community colleges, the Arkansas Department of Higher Education began with a top-down approach, first engaging college presidents and chief academic officers. Nevertheless, the vision from the beginning was "to include everyone who was interested and to make sure people were interested," says Karen Wheeler, formerly the department's associate director for academic affairs. "We wanted it to be so successful that other presidents would want in." The innovation benefited from good relationships among agency heads at the Arkansas Department of Higher Education, the Arkansas Association of Two-Year Colleges, and Temporary Assistance for Needy Families.

At the local level, career pathways programs depend on relationships among, for example, college personnel, local Workforce Investment Boards, and other local funders to support a range of activities. In Washington, SBCTC worked at multiple institutional levels to support the spread of I-BEST. Instead of choosing between either top-down or bottom-up reform, it looked at both ends of its system at the same time, changing policy as colleges tested and learned about the model. In addition, system leaders "worked the middle," says Israel Mendoza, the state's former ABE director, bringing deans, vice presidents (who control teaching workloads and assignments), and other college staff into the conversation. "Working the middle" also includes working with staff such as registrars. As Mendoza points out, "If you

bring in registrars or other administrative staff in the beginning, they can help identify and solve problems before you get stuck in them.”

Across interviewees from states and colleges, the importance of engaging faculty in scaling up is a consistent theme. As research suggests, to improve student achievement, change in educational practice needs to happen at the level of the classroom (Wachen et al. 2012; Elmore 1996; Hassel & Steiner 2000). To make that happen requires the involvement of faculty, who play an important role in identifying and validating problems, designing interventions, making the case to their peers for the innovation, and providing peer-to-peer professional development. For example, faculty members in Texas have been instrumental in shaping the scale up of developmental education reforms. State leaders asked college presidents to designate faculty who would identify possible innovations for improving student performance and outcomes. Faculty and other staff came together and identified a set of four interventions to scale up throughout the state’s community colleges. This group of faculty and staff continues to meet to guide and learn from implementing the interventions.

Indeed, faculty must play a leading role. According to Cynthia Ferrell, associate director of Student Success Initiatives at The University of Texas at Austin, “We will reach the tipping point in statewide scaling of successful innovations and significantly change what happens in the classroom only when faculty engage in proactive and collaborative leadership roles.” Having the support of faculty as well as the state association of community college presidents from the beginning has helped Texas broaden support for reforms.

SUMMARY: PLANNING

- > The state leaders responsible for scaling up begin with an understanding of the context of the system in which they work.
- > Thinking at scale from the beginning—having the intention to reach across the system—guides subsequent action and defines the range of stakeholders to be engaged, both inside and outside the system. Early planning activities, often less visible than subsequent actions, are just as important.
- > Systems are made up of people as well as policies and structures. Relationships and trust are a precondition for scale and are beneficial throughout the scale-up process. Leaders ensure that the people implementing an innovation have a voice in its planning, and that proposed solutions meet their perceived needs. Conversations, connections, coalitions, and considerations precede any definite moves.
- > The proposed solution addresses the problem. Even more important, those involved in implementation acknowledge the problem and see the proposed innovation as a viable solution. Clearly defining the problem, in both quantitative and qualitative forms, helps drive change, as does framing data in a way that speaks to stakeholders’ priorities. The definition of the problem is a major determinant of the specifications of a model to be created, not to mention the outcomes.

- > Planning for scale requires envisioning what scale will look like. Who will the innovation involve directly and who will it affect? What procedures and policies must change? What roadblocks must be removed? What resources will be required?

INITIATING

With a nuanced understanding of the system and landscape, a clearly defined problem, and a potential solution, it is time to identify and engage likely colleges for initial implementation. This is where the actual work of program development—refining and adapting the model—takes place.

Once the colleges are engaged, the first stages of implementation may involve trial and error. Those involved at the state and local levels systematically learn from experiences as implementation begins in the field, then refine the model and prepare it for further expansion. State-level program leaders create guidelines, organize data systems, and build pathways for communication. They watch for emerging needs, often creating structures as the need for them becomes evident. Local leaders shape implementation at the college and for the state as well.

The focused activities of initiating include:

- > Selecting the first round of implementers;
- > Creating systems and infrastructure for data collection, communication, and peer learning; and
- > Learning from experiences in the field.

SELECTING THE FIRST ROUND OF IMPLEMENTERS

The first colleges in any initiative are trailblazers. They identify effective practices and, equally useful, uncover challenges. Later, these colleges and the leading staff serve as resources as new colleges join the initiative.

Given their importance, the initial implementers of a system-wide initiative should be selected with care. In some cases they are self-selected (as was the case with Oregon's Career Pathways initiative), but more often, the system office selects the colleges to participate in a state-led initiative through a competitive process or other approach. It may initially seek to engage colleges that have particular strengths, or institutions may volunteer because of interest, strength, or need. Washington

The first colleges in any initiative are *trailblazers*. They *identify effective practices* and, equally useful, *uncover challenges*. Later, these colleges and the leading staff serve as *resources* as new colleges join the initiative.

State first developed the I-BEST program based on the demonstration projects of five volunteer colleges, but when SBCTC formally piloted the I-BEST model, it intentionally selected a diverse set of ten colleges. State leaders recognized that others would need to see how the model worked in a variety of settings and contexts. Faculty and staff from the pilot colleges later served as peer coaches for colleges implementing I-BEST as the program grew.

CREATING SYSTEMS AND INFRASTRUCTURE

A program operating at scale depends on both structure and infrastructure. While each component of the system is constructed consciously and separately, taken together, the separate structures for guidelines, communication, data collection, and scheduling constitute the *infrastructure*, a framework that maintains the working rhythms of a program and provides consistency that helps keep implementers on course. Although a functioning infrastructure may be invisible, its essential roles become more visible if it functions poorly. Ideally, systems for communication, data collection, and dissemination of information are established during the planning phase, but often, in the real world, they are created on a just-in-time basis in response to emerging needs.

Louisiana leaders created a number of structures as they planned for the launch of WorkReady U, a new model for providing adult education services. The Louisiana Community and Technical College System developed a business plan that outlined the organizational, operational, and financial elements both for moving adult education from the K-12 system to community colleges and for a new focus on preparing adult students for work. The plan had three organizational components: business operations (finance, procurement, and information technology support); program integrity (regulatory compliance, performance management, provider standards, and provider development); and program stability and growth (marketing, business and community partnerships, and student recruitment and retention). The system shared the plan for this infrastructure with stakeholders throughout Louisiana to facilitate its implementation.

The Arkansas Career Pathways initiative took a just-in-time approach to building structures and systems. It started with one college program funded by a private foundation. In the first year as a state program, ten more colleges joined the initiative. A year and a half into the initial grant, when Karon Rosa became director of the state program, it was evident to her that the program needed both clear systems and state-level capacity:

At that point, there was chaos, no consistency across colleges. Every college was doing something different. We had principles legislated as performance measures (Act 1705) of what to include in a college program, but no one knew the policies. Campuses had made proposals about activities but not about outcomes. I realized that if we didn't have systems, it wouldn't work.

Now, each college pathway program has a team replicating the structure of the central office team. A local director is the program's point of contact, a person is responsible for finance and data, and there are one or more advisors or case managers, depending on the numbers of students being served.

Arkansas Career Pathways gives particular attention to capacity building for the colleges, professional development for campus staff, and opportunities for peer learning. From the beginning of the effort, the Arkansas Career Pathways organized regular meetings to inform people of recent research and keep staff on top of relevant policy shifts. These were opportunities for campus leaders to meet and share ideas. For similar purposes, Oregon sponsored Oregon Pathways Academy in 2005 and 2007 and a Healthcare Career Pathways Summit in 2008, all involving teams from all 17 colleges, their local partners, and a state-level team.

LEARNING FROM EXPERIENCES IN THE FIELD

We view implementation as a process, where we regularly gather and use feedback for continuing improvement.

–Susan Wood, Vice Chancellor for Academic Services and Research, Virginia Community College System

Even with well-developed plans and models, turning theory into action is challenging. To implement a program, local institutions must understand it well enough to recreate it in their local environment. No program model is so foolproof that it can be implemented without adaptation in any setting. The challenge increases when even the guiding principles must be adapted locally. In the cases studied, state leaders realized the need to learn from the experiences of the partner colleges, distinguishing local adaptations from practices that can be shared widely. This is also part of ongoing internal evaluation. Working with the early implementers, state leaders refine the model as part of the process of extending it to more colleges.

In determining how to improve Washington's services for adult education, SBCTC's first step was to invite colleges to try new approaches—and to offer grants as incentives to be pioneers. Three schools came forward with proposals, then two more. As former Washington State ABE Director Israel Mendoza explains, the state “selected the best approaches in recruitment, orientation, instruction, outreach, support services, and other program elements, wrapped it all together, and called it Integrated Basic Education and Skills Training (I-BEST),” a program that integrates basic skills instruction and occupational training and supports adults' advancement in career pathways.

As the state moved toward scaling up I-BEST, SBCTC launched pilots in 10 colleges. The state did not anticipate 100 percent success at every college; rather, it used the pilots to observe the program in different settings and identify both elements that contribute to its success and barriers to scale and sustainability. As the initiative has expanded, reaching all 34 community and technical colleges, each college

implements I-BEST in a unique way that draws on local strengths. As Mendoza points out, “The program evolves as the colleges and faculty learn how to do it better.”

In Virginia’s redesign of developmental math, the system office is refining the model based on colleges’ experiences during the early implementation phase and has organized a Developmental Math Implementation Support Team, comprised of faculty, central office staff, and researchers. The team visited all 23 colleges in the first semester of implementation, providing support while also gathering ideas to share across the colleges. By analyzing the information gathered during campus visits, the central office identifies beneficial practices and shares them widely.

One surprise in Virginia was the range of ways colleges implemented the redesigned modules. “We thought there would be two ways of implementing the math modules: technology or classroom-based, but we found there are more like 50 ways,” says Wood. “Now we want to think about what to bring back to uniformity. What is state policy? What is local?” Virginia is now applying insights from the experiences with the developmental math redesign to refine system-wide reengineering and continuous improvement.

SUMMARY: INITIATING

- > Initiating is a time of intense learning on all fronts. Colleges are implementing a new program, which often means they are creating or repurposing structures. They may add staff, or current staff may take on new roles. Assumptions made during the planning phase may prove to be incorrect, making it important to be open to learning from early challenges.
- > Clear and ongoing communication is critical to maintaining a common understanding of guidelines and expectations. System leaders create mechanisms for communication from the system office to the colleges, from the colleges back to the system, and across colleges.
- > As colleges implement the program, the state office watches for and responds to the needs of early implementers as they translate theory into practice. Colleges need to know they have someone to turn to when challenges arise. Central office staff learn from experiences in the field and bring that information together to refine solutions.
- > The central office builds its own capacity to support ongoing program growth and development. It assigns staff to oversee the initiative, and it creates infrastructure for communication, data, and professional development.
- > Professional development opportunities for college staff are essential, as are ways that staff from different colleges meet and learn from one another. Ongoing peer learning opportunities (live and online) generate a network of practitioners who can turn to one another with questions and ideas. This network is part of the program infrastructure; collectively, the group surfaces effective practices and refines the model.

EXPANDING

The next phase is expanding—bringing more colleges into the network (as well as expanding the program at each college). By this middle phase, systems are in place to support the colleges, and the experience of the trailblazers has heightened the central office’s understanding of the innovation. Lessons learned during initiating are highly beneficial in helping the second or third wave of colleges get started; state leaders redefine the model and adjust timelines and expectations.

New colleges need technical support of various kinds, including assistance with building their capacity to implement the program in terms of structures, policy, and human resources. Building on the system capacity developed during the initiation phase, the state office responsible for the program supports new colleges, orients them to the guidelines, systems, and structures in place, and incorporates them into structures set up for collaboration and peer learning.

The continuous improvement processes set up during the initiating phase extend into the expanding phase. The model continues evolving as more colleges adopt the reform. Central office staff address these adaptations, balancing flexibility with fidelity to the model.

The timeframe for getting to the expansion phase varies by state and by program. Each state in this report took time in the early stages of planning and initiating to garner support, recognize the magnitude of the problem, decide to change, and explore possible solutions. Once the state had a robust but flexible model in the field (such as I-BEST, which allows colleges flexibility in pathway development so long as team teaching and other core program elements are included), it started expanding that model. In these particular cases, all colleges in each state had adopted the innovation within two to five years. The experience of these states demonstrates that working on systems change at the state level requires thinking and planning in terms of years rather than months.

The timeframe for getting to the expansion phase varies by state and by program. Each state in this report took time in the early stages of *planning* and *initiating* to garner support, recognize the magnitude of the problem, *decide to change*, and *explore possible solutions*.

The focused activities during expansion are:

- > Incorporating new colleges, providing technical support, professional development, and connecting to the network;
- > Balancing fidelity and flexibility in implementation; and
- > Fostering ownership by each college and among college stakeholders.

INCORPORATING THE NEXT WAVE OF COLLEGES

Systems may decide to engage all colleges from the beginning, but most statewide innovations begin with a subset of institutions, and then develop a process for bringing in new ones. Often, the evidence of success at the initial colleges encourages others to adopt the innovation. Sometimes, incentives are necessary to convince colleges to sign on. In either case, the system office establishes a process for getting colleges on board.

Two years after start-up, Arkansas Career Pathways added 14 colleges, reaching all of the two-year institutions in the state system. By that point, the program's evidence of success had convinced presidents to participate. The state Pathways office devised a number of strategies for getting colleges up to speed, including annual statewide meetings and retreats so that staff from all the colleges could learn together. In addition, the Pathways state director and her staff now provide ongoing technical assistance to college program staff on measurement, finances, data, and TANF guidelines. A site monitor visits campuses every year, and the state director organizes monthly webinars, speakers on current topics, and other regular professional development activities.

Oregon Career Pathways started with 5 colleges in 2004, then expanded to 11 colleges in 2006 through an application process, and scaled to all 17 colleges in 2007. The Department of Community Colleges provides incentive grants to colleges each biennium to build staff capacity and implement strategies to achieve specific career pathway goals and outcomes. In a state with a decentralized system that is locally controlled, Oregon's community colleges have a longstanding tradition of meeting quarterly to collaborate, bringing together presidents, instructional deans, student services deans, institutional research directors, and others. The Oregon Pathways Alliance was organized building on this tradition. Co-chaired by community college leaders, it meets quarterly and holds regular meetings for peer learning on leadership practices, promising practices, and strategies for deepening implementation. According to Mimi Maduro, statewide director for the initiative, "When someone learns the details about how a college achieved a certain success, the conversation naturally continues to 'How can we do that?'"

ALLOWING FOR FLEXIBILITY IN IMPLEMENTATION

Programs going to scale must balance promoting a coherent prescriptive model (or providing consistent guidelines) with allowing colleges to adopt and adapt innovations to their particular contexts. Chris Dede (2006a) and other researchers have noted that evolution and adaptation are part of the process of scaling up. To some extent, the level of flexibility in scaling up is determined by the nature of the particular program or initiative. Some models can be modified without reducing effectiveness. While some programs have prescriptive models, others design guidelines that will be adapted locally. The state examples here vary in this respect, but all provide opportunities for local adopters to adapt and express the principles of the innovation in ways that fit their colleges.

Questions of flexibility and localization become more salient as programs expand. Brandon Roberts, an evaluator who has worked on a number of statewide initiatives, notes, “There is a real tension around the local adaptations. There is an almost natural tendency to have different models.” However, if too many models operate under the same initiative, it can be difficult to understand what each college is doing and how well the innovation is working across all the sites. In formative evaluations, Roberts has pushed states to think about whether they want diversity in the field. Through such conversations, he says, states have recognized that having many models in operation can present challenges in attributing participant outcomes to the innovation and thus potentially undermine efforts to pursue scale and sustainability. As a result, for example, states sought to better define parameters in *Shifting Gears*, an initiative of The Joyce Foundation that aimed to help six Midwestern states reengineer adult education, workforce development, and postsecondary education policies to support economic growth and expand job opportunities for low-skilled workers.⁴

In implementing and expanding I-BEST in Washington, SBCTC leaders saw a need to allow some flexibility across colleges. Rather than provide a prescription for exactly how to implement I-BEST, the SBCTC articulated a set of elements that colleges needed to address, such as instruction and assessment that integrate basic skills and occupational training tied to advancement along a career pathway. SBCTC focused on identifying the elements that were necessary for the model to work and that every I-BEST program must implement. For example, it found that team teaching resulted in consistently better outcomes when programs had at least 50 percent overlap in instructional delivery; this overlap is a requirement for program approval.

The career pathways efforts in both Oregon and Arkansas developed clear program guidelines but explicitly sought ways for colleges to build on local strengths and use those as a basis for growth. In Oregon, the colleges and the state agency partnered to develop guidelines, with common definitions and a systemic framework, as well as guiding principles for developing career pathway road maps. Colleges could then begin from their own strengths and existing relationships to move forward on any of the multiple areas of the pathways framework (e.g., high school, Adult Basic Education, work certificates, Associate’s degrees at community college that articulate to Bachelor’s programs or lead to work). While applying a common set of design criteria and measurable performance outcomes, leaders of Arkansas Career Pathways encouraged colleges to design programs that would respond to the needs of their respective urban, rural, mountain, and delta communities and the work opportunities they offered.

Whether scaling up a precise model or one with flexible parameters, system leaders must communicate effectively about the purpose, nature, and expected outcomes of the innovation. Colleges need to understand the intervention, says Mendoza, “so there’s at least a beginning of a common language of what this is, how it works, so that people can communicate the benefits of doing it, and convey what is and is not different about it.”

“It’s not easy to have lots of people understand the same concept,” Mendoza adds. The messaging around the intervention needs to be consistent from the level of state leadership, down through presidents, to faculty and staff across colleges in order to support coherent scaling of the intervention.

FOSTERING OWNERSHIP

Closely related to the dynamic balance of local design and essential commonality is the idea of ownership. The local design of a program can contribute to a sense of local ownership. Cynthia Coburn (2003) points out that such ownership is important to scaling as an external reform becomes an internal reform and educators want to manage it and ensure its success.

Ownership can grow from a hands-on experience of the program model, but it should not be limited to the individuals closest to the program. Community colleges often struggle with small programs that are viewed as fiefdoms or only “owned” by their creators. Speaking of I-BEST, Mendoza notes, “You want the whole campus to own the initiative so that everyone feels responsible for its success.”

Although Virginia conceived its developmental math model at the system level, the faculty at every college own it. Cheryl Thompson-Stacy, president of Lord Fairfax Community College, notes that student success was the incentive for teachers to accept the model. “The faculty here are dedicated to student success. Whether it’s their idea or not, if it works for the students, they own it.”

In the Arkansas Career Pathways Initiative, colleges create programs that respond to local community and work opportunities. Colleges meet criteria and measurable performance outcomes in ways that fit the culture of each institution. Along with their sense of belonging to the state network, “at the local level, it’s their program, they have full ownership,” says Rosa. “We approve activities to be sure they meet federal guidelines, but it’s their local program.”

Arkansas Career Pathways also uses financial incentives to recognize strong local work when colleges meet their goals; this encourages both local ownership and innovation. The state has reserved one million dollars from its TANF funds to reward program outcomes above set goals, as long as the funds are used only for TANF-eligible activities. Colleges get a set base amount, but the incentive funding is an extra motivator and a reward to program staff. It lets colleges make local decisions about what can strengthen the program. As Career Pathways Director Karon Rosa makes clear to them, “‘This is money that is the result of your staff work.’ And they have done creative things, like loaner laptops in rural areas, things we wouldn’t have thought of.” Incentive funding recognizes local strengths and gives colleges extra resources to meet local needs.

SUMMARY: EXPANDING

- > As programs expand in breadth and spread, bringing in waves of new colleges, they build on the knowledge, structures, and resources developed during initiation as well

as knowledge refined by experience in the field. Professional development is critical for sharing learning and ensuring consistent understanding of the initiative goals and implementation principles.

- > It is important to balance local variation with adherence to a statewide model. The local development of the program fosters a local sense of ownership, while participation in a larger peer learning network gives a sense of identity and membership in an extended community.
- > Ongoing evaluation helps with determining the balance of fidelity and flexibility. State leaders can use data to assess whether local adaptations maintain, lessen, or increase the overall effectiveness of the model.
- > During expansion, more people become involved, making consistent messaging critical for focusing everyone, including staff, faculty and leaders, on the initiative's mission, goals, and progress.

SUSTAINING

Getting to scale with all 17 community colleges participating—that was the easy part of the journey. That was the beginning of the journey, not the end. Working across “silos” and doing the day-to-day systems building and culture change over the long haul—that’s the hard part.

—Mimi Maduro, Statewide Director, Oregon Career Pathways Initiative

Even after a system engages all colleges in an initiative, the act of sustaining is dynamic, requiring continuity and flexibility. The strategies and activities that brought a program to scale in a state system need to be ongoing. Professional development, communication, and the network of practice all continue. Without the novelty or excitement of start up, sustaining relies on changing the norms of practice and keeping successes visible.

The focused activities of sustaining are:

- > Promoting culture change;
- > Policy—including financing—both of which have the potential to help or hinder scale-up efforts; and
- > Evaluation, an ongoing process that supports the sustainability of innovation.

CULTURE CHANGE

When most people take new things on, they add them on, on top of what they have already been doing that they believe is successful. To really sustain [an initiative], I have to not just add it “on top of”; I’ve got to start embedding it “within” and changing the culture and beliefs.

—Israel Mendoza, Former Director, Adult Basic Education Office, Washington State Board for Community and Technical Colleges

In linking scale with systemic change, Frances Westley and Nino Antadze (2009) describe such changes as “a complex process of introducing new products, processes or programs that profoundly change the basic routines, resource and authority flows or beliefs of the social system in which the innovation occurs.” Indeed, sustaining an innovation requires moving it from a marginal position to a central one, in effect, changing the way institutions operate as well as their underlying beliefs and assumptions. Embedding the innovation as standard practice helps secure it—for example, if funding dries up or when new state leadership arrives. “It’s about culture change, not just curricular or structural change,” says Virginia Community College System’s Susan Wood. “People all across system are getting used to the fact that this is the way we do things.”

Indeed, *sustaining an innovation* requires moving it from a marginal position to a *central* one, in effect, changing the way *institutions operate* as well as their underlying beliefs and assumptions.

Changing culture in a system and across campuses can be a real challenge. In Washington, SBCTC Deputy Executive Director of Education Jan Yoshiwara points out, “The whole idea of putting basic skills students into college-level courses challenged a lot of assumptions about how education works.” Normally, Adult Basic Education is a sequence of steps: students complete basic skills courses, possibly along with developmental education, before moving on to college-level courses. “So it was a huge culture shift when we came along and said that you could put students of different levels into class at the same time,” Yoshiwara says.

As Washington colleges began using I-BEST’s team-teaching model, the faculty members teaching for-credit, college-level classes found out that their basic skills counterparts might not be “content experts,” but they were experts at teaching people who have learning challenges. This realization elevated the status of ABE faculty among faculty teaching for-credit courses, who now see them as valuable learning resources. The cultural shift in Washington is now reflected in the expansion of the I-BEST model: The belief in the power of team teaching is so strong that colleges are implementing the model for academic transfer programs and piloting it for developmental education.

Changes in common, everyday practices are good indicators of the depth of changes in culture and assumptions. Maduro describes how Oregon colleges have institutionalized the idea of Career Pathways in their course catalogues:

Three colleges in Oregon have reorganized their college catalogs to a road map approach. The “alphabet soup” of course numbers and names are provided in the appendix. Several other colleges have added career pathways sections to their catalogs. Colleges learned from each other how to make this happen and adapted what another college had done.

To support college-level implementation, Oregon Career Pathways has developed and revised a Career Pathways Institutional Self-Assessment that is used as a framework for discussing implementation and getting to scale at the institutional level. The instrument explores each of the Career Pathways dimensions: leadership; leveraging resources; certificates and road maps; articulation with high schools and universities; pathways for adult basic skills students; student services and support; connection with workforce partners; employer engagement; using data; and coordination with institutional research. The assessment explores implementation across three stages—building critical mass and shared understanding; building capacity, quality, and infrastructure; and engagement in sustaining and institutionalizing Career Pathways college-wide—and leads to a discussion of “where we are now and ideas for the future.”

Culture shift has to take place at the state level as well. For the Virginia Community College System, redesigning developmental education has been a step toward a major cultural shift across the state. Because the state system is centralized, VCCS is well positioned to expand the chancellor’s vision of continuous improvement rooted in data and measurable outcomes. The system launched a Reengineering Task Force in 2009, with more than 20 individuals representing multiple perspectives from across the system. VCCS is now implementing the ideas articulated in the task force’s 2010 report to the State Board for Community Colleges.

Chancellor Glenn DuBois is the lead advocate for moving beyond the status quo, to serve more students and serve them better:

The perspective our faculty offers is critical to the success of this effort. That’s why our commitment to them is so strong and will grow stronger in time. We will ultimately judge our reform efforts not by how good our intentions are, nor by how hard our people work, but rather by the results we can measure. We must make a difference.⁵

VCCS and the colleges are learning by doing, creating structures and procedures to gather input and move toward system-wide solutions. As they work through early implementation, the system office remains open to changing the way it works, such as changing statewide assessment and placement policies and updating data systems to accommodate the redesigned programs. The idea of continuous improvement through reengineering is becoming the norm across the system. Acting on its culture of continuous improvement, VCCS is pursuing more than 30 initiatives, addressing areas such as faculty evaluation, credit audit, and learning outcomes. This process formed the basis for a Trade Adjustment Assistance Community College and Career Training grant from the U.S. Department of Labor.

Of course, establishing the reengineering process has encountered some resistance. As Cheryl Thompson-Stacy notes, “It’s natural with a big change that people will be cautious.” Nevertheless, this new culture has permeated the Virginia system, including the faculty. Faculty members participate because they know it may affect their work. According to John Downey, president of Blue Ridge Community College,

“The faculty get involved because they think they can make it better, and I have seen countless times just how effective their involvement has been in improving the overall outcome of the innovative initiatives!”

POLICY AND FINANCE

Even if funding goes away, the colleges have changed.

—Karon Rosa, Director, Arkansas Career Pathways

No educational program going to scale can avoid the realities of finance and policy, which can help or hinder scale-up efforts. As Rob Johnstone, senior research fellow for the Research and Planning Group for California Community Colleges, notes, “There’s an obvious answer to why people don’t scale. It’s the role of cost. Scaling successful small programs can be perceived as costly from financial, cultural, and infrastructure standpoints.” However, Johnstone continues,

Cost may be used to avoid navigating tricky political issues. That is, stating that something is “too expensive to implement” can shut down exploration of finding a way to attempt to achieve scale with successful small-scale innovations. Also, college and state leaders may not consider the issues of return on investment and downstream revenue—the idea that improved outcomes may be worth an up-front investment that is slightly higher. Finally, there are economies of scale to consider—things that are costly with small numbers of students may be proportionally less so at scale.

Financing is complicated further because many programs start with external funds, often grants. Start-up funding can be a strong incentive for initial participation, but programs must find sustainable resources. Most would like to get new allocations, but says evaluator Brandon Roberts, there is often a need to repurpose existing resources to support innovation.

This can entail reevaluating current programming within a state or college, which can pose a challenge when it points to shifting the status quo,

characterized by a need for structural, cultural, or personnel changes. Not everyone is comfortable with the difficult choices that may come with finding the resources to sustain innovation.

Often, states finance scaling up by combining or “braiding” multiple sources of funding, including grants and state and federal resources. In Oregon Career Pathways, both the statewide program and the campus programs have used multiple state and federal sources of funding creatively. Oregon has funded the Career

Financing is complicated further because many programs start with external funds, often grants. Start-up funding can be a strong incentive for initial participation, but programs must find sustainable resources.

Pathways Initiative through multiple funding streams over the past eight years, including the Governor's Employment Workforce Fund, Workforce Investment Act (WIA) Incentive Grants, WIA Title I-B funds, Perkins Act funding, federal stimulus funding, and the Community College Strategic Fund.

High-level support helps institutionalize an initiative. Career pathways in both Oregon and Arkansas have benefited from political advocates. At the state level, Oregon's Career Pathways Initiative has consistently received support from the governor, the state board of education, the community college commissioner, and the Oregon Workforce Investment Board. To demonstrate college-level support, the Oregon Presidents Council originally signed a "Career Pathways Resolution" in 2006 and have recommitted to the initiative in 2008, 2010, and 2012.

Arkansas Career Pathways uses data on demonstrated outcomes as a strong resource for garnering ongoing financing, given the initiative's vulnerability to shifts in federal funding, particularly TANF. Those data were key to the selection of Career Pathways to be one of ten promising programs participating in a national initiative sponsored by the U.S. Department of Health and Human Services, Administration for Children and Families, Office of Family Assistance. "Originally there were probably a dozen programs that were supported by TANF," says Rosa. "A lot of them were small, boutique programs. Now the only program supported is Pathways. The others didn't have data; Career Pathways makes the data visible across the state and in DC."

In the early stages of I-BEST, Washington colleges cited cost as a major barrier to sustaining and scaling up the model, which costs more than standard basic skills education because two teachers—a basic skills instructor and a training content instructor—prepare and teach courses together. Eager to remove the cost disincentive, SBCTC changed the reimbursement structure for Adult Basic Education students to provide a 1.75 FTE reimbursement rate for I-BEST students, higher than that for regular students. This policy change minimized the financial risk for colleges taking on I-BEST.

The change was important to I-BEST symbolically as well as practically. "A system has to be willing to change, too, not just the colleges," Yoshiwara of SBCTC suggests. "There is value in their seeing you change on their behalf to make an innovation work." In fact, instituting the 1.75 FTE structure meant delving into the sacrosanct process of counting enrollments, but SBCTC leaders felt the need to remove barriers to colleges' participation in I-BEST. SBCTC leaders also used the strong data on student outcomes to ask the legislature to include the program in the state budget, with enough funding to support I-BEST at every community college in the system. Backed by a number of powerful advocates, including the state Workforce Training Board, SBCTC received the funding and expanded I-BEST statewide. Over time, research has shown that the implementation of the model is cost neutral and that the state's additional investment to support I-BEST has strong payoffs for individuals and communities.⁶

EVALUATION

Evaluation is valuable to a scaling-up effort from the beginning, providing data on a program's effect and information for program development. In the initiating and expanding phases, formative evaluation can help local and state staff understand how colleges (or departments within a college) are implementing the innovation and interpreting the program model. As researchers such as Robert Sternberg and his colleagues (2006) and Rose Asera (2008) have noted, data obtained through evaluation can both provide information to support continuous improvement and contribute to the sustainability of an innovation: Data provide evidence of effectiveness, which in turn, can generate continued support. Once an innovation has been expanded across a system, evaluation can help reveal the extent to which the innovation has achieved scale and has the potential to be sustained, including the degree to which it has become institutionalized into the system's culture and operations. Sharing the findings about program success is a critical element of communication to facilitate scaling and ensure continued support for a program (Sternberg et al. 2006).

Washington has made good use of evaluation throughout the development and scale-up of I-BEST. Early evaluations clearly demonstrated improved outcomes for students in I-BEST programs; advocates then used the results to build support at the colleges as well as the legislature. Subsequent evaluations and the rich data they provide have protected the program from recent budget cuts and led many other states to adopt or adapt the model.

Organizing evaluation around the four dimensions of scale proposed by Cynthia Coburn (2003) can be useful at this stage because they go beyond the numbers to explore the changes related to the innovation:

- > **Spread: breadth and numbers.** Did the system or college reach the desired proportion of the target population in the planned timeframe? Have the intended outcomes been achieved?

Data provide *evidence of effectiveness*, which in turn, can *generate continued support*. Once an innovation has been expanded across a system, *evaluation* can help *reveal* the extent to which the *innovation has achieved scale* and has the potential to be sustained, including the degree to which it has become institutionalized into the system's culture and operations.

- > **Depth: quality of implementation.** Has implementing the innovation changed practice? Has the innovation reached the point of contact with students (most likely) in the classroom?
- > **Ownership:** Is the responsibility for the innovation in the hands of those who deliver the services? Are others across each campus aware of and supportive of the innovation? If it started with external support, is the innovation now regarded as an internal program? Is it supported with internal resources?
- > **Sustainability:** Has the innovation been institutionalized culturally, operationally, and financially?

SUMMARY: SUSTAINING

- > The activities that propelled the scaling-up process—communications, data collection and reporting, and maintaining a peer network—keep going even after meeting initial outcome targets. These ongoing activities are as vital in sustaining as in bringing a program to scale.
- > Getting an initiative to take root often means challenging assumptions and expectations. People need to believe in the model to keep doing it in the long term. Both ongoing a communications strategy and professional development are essential for bringing new people into the community, deepening the knowledge of those working at the colleges, and supporting emerging leaders in the network.
- > Sustaining is about taking something new and different and making it standard practice. Once it becomes standard practice, it is much less vulnerable to shifts in state and college leadership or legislative priorities.
- > The state offices organizing a program at scale are well aware of the realities of finances and policy—that state and federal policies shape guidelines, particularly for workforce development programs. They know these realities are potential challenges, but they use them as resources whenever possible. To sustain the work, the system office addresses policy and funding barriers that act as disincentives.
- > Program leaders play an important role in keeping the initiative visible and viable. Advocacy continues in order to maintain financial and political support. When appropriate, leaders engage political forces outside the community college system as supporters of scale-up efforts. Ongoing evaluation can provide valuable evidence that can maintain and increase support.
- > Financing innovation—for both central-office and college costs—is an ongoing process. State and grant funds may stimulate colleges to participate, but they are insufficient to run an entire program year after year. Central-office staff must work with colleges to find local funding and include stable campus funds. Demonstrating return on investment will help attract sustainable funding. At the same time, it may make sense to stop funding less effective programs in order to support what works. Cutting programs is hard, but data help make the case for change.

THINKING AT SCALE: LESSONS LEARNED

Even as the system contexts and innovations vary, the state experiences examined in JFF's research revealed a set of consistent themes and lessons. Looking at these cases has enriched our understanding of scale—in particular, the process of scaling up, the people involved, and the critical benchmarks along the way. The insight gained from the field will help us in our work to support states and college systems seeking to scale up a program or initiative.

THINK SCALE FROM THE BEGINNING.

The strongest message from state systems and colleges is the need to think and work at scale from the beginning. Systemic thinking in a state system or college means working in all directions: top down, bottom up, and through the middle. The vision of what scale will look like, and what it will entail, drives planning and implementation.

Leaders are key drivers of change: They communicate a vision of what is possible, and they reach out to the full range of constituents and stakeholders about institutions as a whole, the characteristics of colleges, and an understanding of what channels are most effective for promoting innovation. For example, staff of the Virginia Community College System work in very pragmatic ways to extend the chancellor's vision of continuous data-driven improvement and engage college personnel at all levels to participate in realizing the vision. In Louisiana, the system president communicates a need in human terms, and his stories of that engage stakeholders across the system in addressing it.

In the state systems studied here, each leader had a vision and strategy to scale up innovation from the beginning, and they all anticipated and prepared for responses, both enthusiastic and reluctant. Some states started by working across the entire system; in others, the state carefully selected a diverse group of pilot institutions before the initiative, and then expanded the effort to all students, building on this evidence and experience base. Even in the absence of funding to bring on new colleges, some states proactively provided professional development so that colleges would be ready to move forward more quickly as soon as sufficient resources could be secured.

SCALE AND SYSTEMS CHANGE ARE INTERCONNECTED AND INTERDEPENDENT.

A common theme across the interviews is the need to change both systems and practices in order to reach the desired outcomes. States and colleges cannot achieve scale simply by hiring new staff or enrolling new students. They must rethink, in very basic ways, the way in which institutions deliver programs and services. In Washington, that meant changing the delivery of Adult Basic Education; in Oregon, it meant changing the structure of courses, credentials, and programs to create a system of pathways.

More often than not, large-scale problems do not respect system boundaries; effective solutions often engage multiple agencies and cross structural and cultural barriers. Washington created a program that entailed working across Adult Basic Education and community college systems that previously had minimal interaction. It took time for faculty to learn to work together and for the state to streamline critical system structures, such as data collection and analysis. But this one-time pilot has grown to be the standard operating procedure across the state—and many other states are emulating it.

BALANCE FIDELITY WITH LOCAL ADAPTATION.

Creating large-scale systems change requires balancing consistency with variation. In the state programs studied here, leaders recognized that programs scaled up across a state were likely to be implemented by colleges unevenly in the absence of guidelines and guidance that promote consistency. They also recognized that to promote ownership, local programs needed some autonomy. In response, programs provided guidelines and collaborated with college staff to shape programs that reflected local strengths and met local needs. Local flexibility was encouraged as long as it fit within the overarching program framework. As they sought to balance consistency and flexibility, system-level staff drew clear boundaries about program guidelines.

COMMUNICATION IS THE CONNECTIVE TISSUE OF A STATEWIDE PROGRAM.

Communication is essential throughout the scaling-up process. Early on, effective communication strategies build consensus around a shared vision. During the initiating phase, program leaders communicate program guidelines clearly so that those who consider participating understand the parameters for implementation.

Of course, communication is a two-way process. Even as leaders project a vision, they also listen to diverse perspectives across the system. They encourage and respond to questions. In addition, these state programs all use technology—websites, listservs, webinars—for communication not only from the central office to the field but across colleges. College staff benefit from ongoing contact with peers who have similar responsibilities and grapple with similar issues.

PARTNERSHIPS AND RELATIONSHIPS ARE CRUCIAL.

Effective leaders do not work in isolation. Partnerships and relationships are crucial. A common theme throughout the interviews was that partnerships, collaboration, and relationships made scaling up possible. Systems and institutions are made of individuals. Relationships and trust among them at all levels are the social capital to begin an initiative. Networks, relationships, and collaborations are a resource for growing and replicating programs. And the professional networks that arise during the scaling-up process contribute to its ongoing vitality.

SCALING EFFORTS REQUIRE RESOURCES AND THE AGILITY TO MAINTAIN THEM OVER TIME.

Large-scale innovation—even to reduce costs—requires a significant outlay of resources, especially at the beginning. Part of thinking at scale is recognizing both what it will cost to implement the program at scale and what it will cost to get to scale. In addition to regular costs associated with implementing programs across multiple institutions (such as staff time, facilities, and materials), scaling up may entail costs for professional development, communications, and convening. Designated resources are needed to move an innovation from pilot to sustained practice. Resources are also needed to support data collection and evaluation. Leaders help identify, braid together, and sometimes reallocate existing sources of funding while also thinking creatively about how to access new resources and reduce existing costs.

DATA ARE INVALUABLE AT ALL STAGES OF SCALING UP.

Data illustrate the need, thus making the case for change. In Washington and Virginia, the magnitude of the problem was visible in numbers; state leaders used data as the call to action. During implementation, data provide formative feedback on program development, can indicate mid-course corrections, and are central to evaluating outcomes. And in the sustaining stage, data showing strong positive outcomes are a resource for advocacy and maintaining the visibility of a successful program, as the Arkansas Career Pathways Initiative has demonstrated.

However, it is easy to underestimate the cost of implementing and sustaining a system for collecting and applying critical information at all stages of initiating and sustaining a scaling-up effort. Thus, including such a system is part of initial planning, as is calculating its cost—and benefits—over the years.

SUSTAINING IS A DYNAMIC CONDITION, REQUIRING ONGOING ATTENTION AND ENGAGEMENT.

Many things change during the ongoing process of scaling up. The first stages can generate energy as change is implemented. As a program matures, the challenges shift. These complex innovations depend on multiple variables and are easily impacted by shifts in structures, resource allocations, staff positions, and institutional culture. Leaders must remain attentive and both flexible and firm in their responses to any changes that arise, so that norms and culture become resources for improving the lives of students across the state, rather than bulwarks of the status quo.

CONCLUSION: EXTENDING THE CONVERSATION

These stories of community college systems and programs that have effectively scaled up innovation demonstrate that it is indeed possible to extend a program from one to multiple colleges across a state. State leaders paid attention to similar issues at similar times in the process. They all began with a big vision and systemically moved toward a statewide program. They engaged stakeholders and built ongoing relationships to foster ownership and support of innovation. They created structures to support communication, professional development, and data gathering. They anticipated obstacles when possible, put out fires when needed, and through it all kept the spirit of the program and the possibility of serving students central to the work, even in the face of resistance to change. The stages of scale may all sound like common sense and dimensions of any successful program, yet common sense is not necessarily common knowledge. These stories represent people and programs that persisted and turned ideas into practice.

These are broad-brush observations, the common moves across a handful of states and programs. As is so often the case in questions of scale, we heard the most about spread—the number of colleges transformed, the number of students reached. We also heard about ownership and sustaining, but we still have much to understand about how to foster deep programmatic change. There is more to learn about how policy can support or impede the process of scaling and how to foster system leaders who think at scale.

What stands out, though, is the fact that getting to scale requires large investments of time, energy, and resources. The time frame for sustainable system change is several years. The leaders we interviewed are willing to put in the effort needed to drive the complete scaling process from planning to sustaining. All would also argue that the investment is worth it: You have to work at scale to change the lives of hundreds or thousands of students.

Thinking Big is a working document—a point in a conversation about what it means to get to scale. Our goal is to build upon strong theoretical work by incorporating the essential voices of experienced practitioners. We also want our observations and conclusions to be useful to leaders and practitioners at the state level, in community colleges, and even in other settings, such as K-12 education or workforce development. While no magic bullet guarantees a successful scale-up effort, we believe the lessons shared here will help you deepen your thinking of scale. We invite you to join us in this conversation by sharing your experiences.

APPENDIX I. WHAT THE LITERATURE SAYS ABOUT SCALE IN EDUCATIONAL INNOVATION

This report on the practice of scaling up at the state level rests upon on a foundation of frameworks for thinking about scale and the scaling-up process. These have emerged as educational researchers and theorists have wrestled with the question of how to increase the impact of innovations in education. While not an exhaustive literature review, this appendix provides an overview of common themes and frameworks throughout the literature on scale. The frameworks range from the theoretical to practical action steps, while always focusing on four types of question:

- > What does scale look like when it has been achieved?
- > What qualities make an innovation scalable?
- > What institutional qualities support and promote scale?
- > What processes exist for getting to scale?

WHAT DOES SCALE LOOK LIKE?

At its most basic, scaling up an educational innovation means serving more students, increasing the depth of impact on each student, and sustaining progress. Indeed,

numbers can serve as the most tangible evidence of scale, yet they do not explain what scale looks like in terms of new policies, practices, and culture.

Much of the literature links scale with systems change. Frances Westley and Nino Antadze (2009) describe systemic change as “a complex process of introducing new products, processes or programs that profoundly change the basic routines, resource and authority flows, or beliefs of the social system in which the innovation occurs.” Such change, they write, can take time to develop and is not necessarily reflected in enrollment numbers.

A growing number of scholars have proposed definitions of scale that go beyond numbers and take into account the conditions that promote and sustain the widespread adoption of an innovative practice. A good starting point for much of this work is Cynthia Coburn’s 2003 article, “Rethinking Scale: Moving Beyond Numbers to Deep and Lasting Change.” Writing about the complex processes involved in getting to scale, she identifies four interconnected dimensions: depth; sustainability; spread; and change in reform ownership.

- > **Depth** is the degree to which the innovation is implemented. Is it a superficial change in practice or a deep change that involves teachers’ assumptions about students and learning and leads to a new pedagogical philosophy? The institutionalization of a practice requires that those implementing it truly understand what they are implementing and why.
- > **Spread** is not just the number of classrooms or schools adopting a new practice but the degree to which the norms and principles of the reform effort permeate those institutions.
- > **Shift in reform ownership** refers to taking an external reform effort and making it an internal reform.
- > **Sustainability** is an essential part of institutionalizing practices beyond the initial grant or initiative.

Taken together, the four dimensions describe a deep change in beliefs and practices that takes root in multiple institutions and is sustained even without external funding or resources. The dimensions are interconnected, of course. The degree of change—viewed in terms of both spread and depth—directly influences the shift in ownership; broad buy-in and a sense of ownership are critical for sustainability.

These dimensions are themes throughout the scale-up literature, with some scholars adding additional dimensions to Coburn’s four. For example, Philippa Cordingley and Miranda Bell (2007) add *purpose*, which they define as clarity around the end goals of the innovation. Change is facilitated more easily when it is clear what the change will accomplish. Chris Dede (2006a) expands on Coburn’s work by adding *evolution*. This refers to the feedback loop by which implementers help shape the design of the innovation; it is essential to continuous improvement and adaptation.

WHAT MAKES AN INNOVATION SCALABLE?

Is an innovation suited to scaling up? This question requires two types of answer: Is it worth scaling up? Does it lend itself to scaling?

Richard Elmore (1996) has argued for scaling up only innovations that get to the core of educational practice, “the fundamental conditions of teaching and learning for students and teachers.” Scale-up efforts should focus on innovations that lead to improved outcomes. As multiple authors have noted, this gets to the overall quality of the program: Is there evidence of effectiveness? Is it likely to produce strong outcomes? Does the innovation address the problem? For example, the Scaling Innovation (2012) project of the Community College Resource Center stresses, “No single model is likely to result in substantial gains in student achievement unless attention is paid to aligning what happens in the classroom with the identified needs of students.”

Some programs designed as small pilots will only work well at that scale, perhaps due to the resources required or the size of the target population. Other programs depend so deeply on the context in which they were developed that they are unlikely to succeed in other contexts.

The critical factors affecting the scalability of an innovation include:

- > Can most of the relevant staff and organizations adopt the innovation, given reasonable amounts of training? There is limited potential to scale up a program that relies on enlisting only highly motivated and dedicated people (Sternberg et al. 2006).
- > Is it financially viable at scale? Ideally, the relative costs of the innovation will diminish as it grows (Parcell 2012).
- > Can it be sustained at scale through stable funding sources rather than philanthropy (Slavin 2011)?
- > Is it aligned with current institutional priorities (Parcell 2012)?

WHAT INSTITUTIONAL QUALITIES SUPPORT AND PROMOTE SCALE?

It is essential to consider the characteristics of the institution (or state or other entity) that will be in charge of expanding the program. Researchers have identified a number of institutional qualities that promote scale:

- > **Demand:** Richard Elmore (1996) notes that there is no shortage of innovation in the world of education; the challenge is building demand for new ways of doing things. A large part of getting to scale is changing beliefs and actions. To achieve this, people need to want to change.

- > **Openness to new ideas:** It is possible to want change but simultaneously be resistant to considering new ideas, especially if they challenge the core of teaching and learning (Sternberg et al. 2006).
- > **Level of commitment:** Institutions can be open to change yet vary in terms of the level of commitment to implementing something new. At a minimum, the administration and other leaders must be supportive of trying out new ideas in general and not get in the way. Ideally, they actively invest time and resources in the success of the scale-up effort (Sternberg et al. 2006).
- > **Understanding:** Faculty, staff, and administrators must understand the needs of the student body and design programs to meet those needs (Asera 2008).
- > **Structures:** The institution must have structures to train and support the people charged with implementing the program. Successful scale-up efforts include intensive professional development in the early years of implementation and then follow up to maintain quality, usually indefinitely (Slavin 2011).
- > **Data capacity:** The institution must track progress and make data and evidence visible. The institution must make use of data when developing and refining programs, and then share evidence of success broadly (Sternberg et al. 2006; Asera 2008).
- > **Leadership:** It is nearly impossible to scale up an initiative without strong leaders to guide the process and build buy-in. In particular, there must be “individuals at all levels across the institution . . . responsible for ideas, decisions, and designs in their professional domains” (Asera 2008). With a distributed leadership model, the initiative does not depend on a specific individual, and it is much more likely to survive staffing changes and other developments.

WHAT PROCESSES EXIST FOR GETTING TO SCALE?

As most researchers and theorists note strongly, no silver bullets ensure a successful scale-up effort. It is no easy matter to plan and execute effective actions even with a deep understanding of what scaling up looks like and what factors promote it. Nevertheless, the literature does offer frameworks and strategies for thinking about the processes for getting to scale.

CLOSING THE GAPS

Chris Dede (2006a) conceptualizes scaling up as “closing gaps that exist between the innovation’s demands and an organization’s capacity.” These gaps can occur along three axes—capability, school culture, and policy and management. Closing a capability gap includes providing professional development and technical assistance so that those charged with implementing the reform have the tools and knowledge to

do so. Similar to Coburn's *depth*, closing a culture gap involves changing the norms and beliefs of teachers and administrators. Closing the policy gap entails changing and creating policies to better support the innovation.

SCALERS

Another framework for thinking about the processes for getting to scale comes from the SCALERS concept of Paul Bloom and Aaron Chatterji (2009). The term SCALERS is an acronym for seven organizational capacities that Bloom and Chatterji say support the scale-up of a social enterprise: **s**taffing, **c**ommunicating, **a**lliance building, **l**obbying, **e**arnings generation, **r**eplicating, and **s**timulating market forces. These seven capacities are essential to:

- > Ensuring that the human capital is in place to implement the intervention;
- > Communicating the goals and strategy, engaging stakeholders; and
- > Demonstrating impact and securing necessary resources, a commitment to maintaining quality and impact levels, and incentives to create buy-in.

While social entrepreneurs most directly apply the SCALERS framework, community colleges in the Developmental Education Initiative have applied it to help them identify what they need for an effective scaling-up effort. In this revised model, "lobbying" becomes "demonstrating impact," "earnings" becomes "resources" (the mobilization of financial resources to sustain the initiative), and "stimulating market forces" becomes "sustaining engagement" (Public Agenda/Achieving the Dream 2011).

In the Developmental Education Initiative, successful scale-up goes beyond measurable impacts. Rather, a key indicator of reaching scale is that a practice is institutionalized and that processes, policies, and resources support the innovation (Public Agenda/Achieving the Dream 2011).

Abby Parcell (2012) of MDC, which coordinates the Developmental Education Initiative, revisits this concept in *More to Most*, using the categories as ways to assess the feasibility of scaling up. Colleges must assess which categories are most important for the chosen scale-up strategy and whether they have enough capacity in those areas to succeed. If not, colleges may need to reassess their plans.

CODIFICATION: UNDERSTANDING WHAT IS BEING SCALED

A critical—but often overlooked—step in the process of getting to scale is codifying and articulating the model, with an emphasis on identifying core principles. Without this, it can be difficult to know what elements of the model need to be included as it spreads to new sites and which elements are open to change.

As Dede's addition to Coburn's dimensions of scale suggests, evolution and adaptation are part of the scale-up process. Rarely can successful innovations be replicated with 100 percent fidelity. Dede (2006a) refers to this as the "replica trap." Most often, innovations must be adapted to the unique context of each implementation setting.

Finding the balance between fidelity and flexibility requires a deep understanding of which elements of a model are most critical to its success. There are numerous environmental variables to consider when spreading a successful innovation, including student and instructor characteristics, local culture, and policy (Dede 2006b). Sarah-Kathryn McDonald and her colleagues (2006) echo this idea, suggesting that it may be necessary to modify the program design significantly in order to achieve consistent results across multiple settings. Similarly, the Scaling Innovation (2012) project's Adoption and Adaptation Framework stresses the need for a continuous refinement process that matches the design with the needs of each set of students, faculty, and institutional goals.

TRANSFER OF LEARNING

A common theme throughout the scale-up literature is the need to provide professional development and guidance to those charged with implementing change. Faculty, staff, and leaders must understand their roles in the change, how they will fulfill those roles, and why they are making the change. McDonald and her colleagues (2006) describe training—or professional development—as "a scaling-up strategy [that] focuses on the challenge of growing local expertise." They argue that effective training includes both ideology and practical content—the "why" as well as the "how."

Local expertise is essential to developing the sense of ownership that Coburn discusses, and it is a common theme throughout the literature on scale: those involved in implementation need a clear understanding of what they are being asked to do and why (Cordingley & Bell 2007; Sternberg et al. 2006; Elmore 1996). However, this is difficult to accomplish. It can require many stakeholders to reconsider their assumptions about how teaching and learning work. Deep change is not just a technique to add onto an existing repertoire of practices or small changes in institutional organization. It means a new way of thinking about the education process. As Bryan Hassel and Lucy Steiner (2000) note, "Teachers, unconvinced of the value of change, will go on teaching the way they always have. Hence, it is vital to involve teachers in the creation of new approaches, changing the very culture of the school through collaborative decision making."

BUILDING BUY-IN AND DEMAND

A large part of getting to scale is changing beliefs and actions; to achieve this, people need to want to change. When the goal is to expand effective practices to reach larger numbers of students, there must be a critical mass of key individuals who understand the problem—the reason why the innovation is necessary—and who see the innovation as the way to address it.

Here is where Coburn's definitions are especially informative. She identifies change in ownership and sustainability as essential to the development of scale. To achieve these, those charged with implementing new practices must understand what the new practice is, the rationale behind it, and how they can integrate it into what they do.

Robert Sternberg and his colleagues (2006) discuss the importance of buy-in, especially among the educators who implement the intervention. They suggest that "perhaps one of the major breakdowns in going to scale comes from the fact that good programs have failed to address the critical need to disseminate their findings in a way that communicates effectively with educators." Cordingley and Bell (2007) echo this idea: When there is resistance to an innovation, they write, "it is generally the manner in which change is introduced as much as the change itself that is at issue."

Bloom and Chatterji (2008) also address this idea in the SCALERS framework:

Many social entrepreneurial ventures have been thwarted by an inability to get the word out and be persuasive about what they are doing—either because they cannot afford the advertising and publicity or because they do not understand the culture and needs of their audience well enough to "frame" what they are doing in a way that conveys the core benefits the organization is seeking and attracts media and public attention. In fact, when organizations find the "right" framing (e.g., Mothers against Drunk Driving, Teach for America, Habitat for Humanity) they often can scale faster and have greater impact.

To understand how to achieve the kind of buy-in necessary for scale, it is useful to look at the literature on the diffusion of innovation. In general, researchers have found, people have varying appetites for trying something new. Some want to implement an innovative practice right away; others wait for more evidence of effectiveness. Those trying to introduce an innovation to a new audience must be able to recognize people's appetites for change and understand the factors likely to convince them to try something new.

In one of the seminal works on how ideas spread, *Diffusion of Innovations*, Everett Rogers (1962) describes the Technology (Innovation) Adoption Lifecycle's five types of behavior, from innovators to laggards. *Innovators*, generally a small subset of the potential audience, always look for ways to do things better. They may seem to want change for its own sake. In the middle are *early adopters*, *early majority*, and *late majority*, all of whom tend to be more pragmatic; they want to know the innovation will work, and they want a clear process for adopting it. Most people fall into these middle behavior types. There are always a small number of *laggards* as well—those who simply do not want change. Taking an innovation to scale requires identifying the innovators who will serve as champions and the early adopters who can quickly be brought on board. It is also important to identify the laggards, who can derail the entire process.

It can be helpful to think in terms of the levels at which the change is taking place. With systemic reform to scale up new models in education, change often takes place at multiple levels: the interpersonal level (interactions between students and teachers), within the organization (among the faculty in a department or between a department and the college administration), between organizations (partnerships with external agencies), and the system level (state policy). In public health, this idea is referred to as the social-ecological model, and builds on the work of Urie Bronfenbrenner.⁷ Similarly, in describing the social systems (which could include schools/colleges, districts, and state systems) that form the context for change, Frances Westley and Nino Antadze (2009) identify three important aspects:

- > Culture, which includes beliefs and values;
- > Political and economic structure, which includes the distribution of resources; and
- > Social interactions, which include laws and procedures.

These aspects hint at the different areas that scale-up efforts consider when seeking systems changes, such as shifting culture, reforming policy, and allocating new or reallocating existing funding.

APPENDIX II. THE ARKANSAS CAREER PATHWAY INITIATIVE

This profile is based on interviews with Karon Rosa, director, Arkansas Career Pathways, and Karen Wheeler, associate vice chancellor, University of Arkansas, Little Rock, and formerly associate director for academic affairs, Arkansas Department of Higher Education.

The Arkansas Career Pathways Initiative is an education and training program that serves custodial working poor parents who are eligible for or are receiving TANF funds. The goal is for these individuals to participate in education and training in preparation for jobs in selected local high-demand, high-wage industries. The program, administered by the Arkansas Department of Higher Education and implemented at 25 sites that include all Arkansas community colleges, provides intensive support: adult education or developmental education, with case management and wraparound student support services.

PLANNING

In 2003, Southeast Arkansas College in Pine Bluff piloted the Career Pathways model, focusing initially on nursing, with support from a National Governors Association Center for Best Practices grant and collaboration of Arkansas Association of Two-Year Colleges, the Southern Good Faith Fund, and the Governor's Office.

Strong relationships and trust among a number of state offices and organizations, including the Arkansas Department of Higher Education, the Arkansas Association of Two-Year Colleges, Temporary Assistance to Needy Families, and local funders, made it possible to negotiate the use of state block grant TANF funds to establish and expand Career Pathways as workforce development education at community colleges.

INITIATING

Recognizing the workforce needs in the state, the Arkansas Department of Higher Education piloted the Career Pathways model, adding 10 two-year colleges throughout the state. The initial funding for the pilot was \$11 million from the TANF state block grant.

Karon Rosa, who became director of the state program a year and a half into the pilot, built a central program team of six staff members: the director, a business outreach and development officer, an academic resource to develop the academic pathways, a data expert, a secretary, and a financial person who understood grant funding, reimbursement, and federal guidelines.

Even more than the central staffing needs, Rosa realized that the colleges needed support and the initiative needed an infrastructure. “At that point, there was chaos—no consistency across colleges. Every college was doing something different,” she says. “We had legislated performance measures of what to include in a college program, but no one knew the policies. Campuses had made proposals about activities but not about outcomes.”

Recognizing the implications of inconsistency and a lack of structure, Rosa brought organized systematic thinking to the process:

I realized that if we didn't have systems, it wouldn't work. We went back to the source documents to be explicit about grant performance goals. We defined outcomes in terms of enrollment, attainment, entering employment, and job retention. And we didn't have any data. I knew if we didn't have data, we wouldn't survive beyond the grant.

Rosa knew the state and the programs had to measure enrollment and attainment outcomes: “This is how many students came in. This is how many are employed. This is how many are still employed six months later.” However, higher education is in one state system and Adult Basic Education and higher education are in another. So Career Pathways had to build a unit record data system to collect comprehensive data through an entire pathway. Both the initiative and the data system had to cross educational systems.

To map pathways to careers, the Career Pathways team did not want very-short-term certificates that focused only a single skill, like running a cash register, which would only prepare students for low-paying jobs. Instead, the team identified local high-

demand, high-wage jobs. Karen Wheeler, then associate director for academic affairs at the Department of Higher Education, observed:

We could say what those jobs were, but the colleges wouldn't necessarily believe us. So we brought in the Workforce Strategy Center to do a gap analysis in each community and identify what jobs to focus on. Of course, they were allied health jobs, government jobs, and local manufacturing.

The Career Pathways academic staff person began to document the specific career pathways. The goal was to illustrate to students what they could expect to earn if they took certain coursework. Looking at the identified jobs, central office staff mapped out 400 pathways, and they also discovered that a single program like nursing might have 20 different pathways. They created sequential and continuous pathways that let students build on their prior coursework if they came back to school for career advancement.

Initially, the state designed the pathways and physical representations of them for the use of counselors and advisors. However, says Rosa, once the students got their hands on them, "they wore them out." The students used the maps and concrete pathways to see, step by step, how long it would take and how many courses they needed to complete in order to prepare for a particular job, or the next job that might pay more. The pathways let the students see that they could come back to school once they got a job and continue gaining the skills and credentials for more advanced jobs.

From the beginning, the Arkansas Department of Higher Education envisioned that Career Pathways would be implemented system-wide. According to Karen Wheeler, the agency planned to "include everyone who was interested and to make sure people were interested. We wanted it to be so successful that other presidents would want in."

From the beginning, the Arkansas Department of Higher Education *envisioned* that *Career Pathways* would be implemented *system-wide*.

State politics supported this vision. The democratic governor made it part of his platform that all community colleges would have Career Pathways. After the first two years, at the end of the pilot, the ten colleges had enrolled more than 6,000 students in Career Pathways. And these were difficult-to-serve populations: chronically underemployed individuals; nontraditional students; low-income parents. Other college presidents were interested.

Initially Rosa's Career Pathways staff worked top down, with college presidents and chief academic officers to get the programs started. Once a college established a Career Pathways team, the team's college directors became the point of contact for the central office. Each college in the initiative now has a team of three to six that reflects central office team structure, including a director, someone to manage finance and data, and one or more counselors, depending on the numbers of students being served.

The college Career Pathways team is responsible for the case management approach that connects students to the range of wraparound services that address the common needs in students' lives that can become obstacles and derail students' academic and career aspirations (e.g., transportation, child care, textbooks, financial aid, tutoring). The advisors give early warnings and may go as far as intrusive advising.

Rosa and her staff provide ongoing professional development and technical assistance to college staff on measurement, finances, data, and operating within TANF's eligibility guidelines. Rosa organizes regular annual meetings and monthly webinars with speakers and articles on current topics so that college Pathways coordinators are informed on national and local issues. The annual meetings and retreats, as well as statewide listservs, are opportunities for program staff to share questions, ideas, and what they are learning.

The colleges are setting stretch goals in terms of enrollment and attainment. A site monitor looks at college progress toward goals quarterly and visits campuses every year to be helpful and give feedback. When colleges are not meeting their goals or if they do not qualify for performance funding, the colleges call and ask what they can do to improve. "If we see that someone needs a little more coaching, they get it," says Rosa.

From the beginning, the Department of Higher Education reserved one million dollars for incentive funding to reward outcomes above program goals. Distributing incentive funding based on outcomes "takes the politics and personalities out of the process," says Wheeler. "Even though presidents didn't want to be measured or compared, the state kept incentive funding and renamed it performance funding." The only constraint is that funds have to be used for TANF-eligible activities. They are a reward to program staff for meeting or exceeding goals. " 'This is money that is the result of your staff work,' " Rosa tells them. "And they have done creative things—things we wouldn't have thought of. For example, one rural college used loaner laptops."

Peer learning is a strong resource across the college programs. "Even though colleges compete for incentive funding as a group, they are collaborative and share ideas and information," says Rosa. "We encourage them. When someone has a good idea, we put it out for everyone."

EXPANDING

With pathways defined, data demonstrating success, and systems for communication and data in place, Career Pathways was ready to expand to the next wave of colleges. The enrollment, completion, and follow-up data and the pathways themselves were strong evidence to continue the funding coalition with TANF. Two years after start-up, 14 more colleges joined Career Pathways and were folded into the statewide meetings and annual retreats.

Arkansas is a diverse state, with two urban areas and rural, mountain, and delta regions; each community college is unique. The Career Pathways Initiative lets colleges apply program guidelines and create local programs that respond to local community and work opportunities. Colleges meet criteria and measurable performance outcomes in ways that fit the culture of each institution and reflect the desired program outcomes. All of the colleges have a strong sense of belonging to the state network, yet “at the local level, it’s their program,” says Rosa. “They have full ownership. Once they get the money, it’s their program. There are state and federal guidelines, and oversight from the Arkansas Department of Higher Education. We approve activities to be sure they meet federal guidelines, but it’s their local program.”

Professional development is a major type of central-office support for colleges, and the new colleges immediately joined in regularly scheduled professional development activities and annual statewide peer learning meetings. Professional development helped address one concern expressed by college presidents: They were reluctant to hire new staff as local Pathways directors. What would happen if the program funding ended? The state director reassured the presidents: “Career Pathways campus staff are well prepared and have a lot of professional development,” preparing them for other work at the colleges. In fact, several individuals have shifted from Career Pathways to other campus positions because of their qualifications and experiences.

SUSTAINABILITY

Policy, partnerships, finance, and data play complementary roles in sustaining the Arkansas Career Pathways Initiative. The relationships and trust among the various agency heads that made it possible to support the pilot with TANF funds continues, strengthened by the ongoing work. The Arkansas Department of Higher Education and the Arkansas Association of Two-Year Colleges regularly work together on reform efforts, jointly prepare funding proposals, and they serve on each others’ steering committees. The notion of including adult education had not been discussed in higher education before the Career Pathways Initiative; now it is a participating partner.

Partnerships at the state level are mirrored at the college level, where Career Pathways programs establish working relationships with local Workforce Investment Boards and the local Department of Human Services office, as well as with faith- and community-based organizations. Pell Grants cover tuition for some students. Pathways programs contract with vendors for child care and transport vouchers, using TANF funds. If TANF cannot cover certain expenses (e.g., books, work uniforms), other local funders usually can. At the community level, the resources are linked to support student progress. The collaboration and coordination will sustain at the state and community level, even if funding changes.

Data are essential to the initiative's growth and success. For the last two years, all of the colleges have met their goals. The composite data show strong reach and impact. For example:

- > Between 2006 and 2012, more than 27,000 adults enrolled in Career Pathways at all colleges across Arkansas.
- > In Fiscal Year 2010, the Career Pathways Initiative enrolled 10,017 students, and awarded 2,128 employability certificates, 755 technical certificates, 763 Associate's degrees, 51 GEDs, and 736 Certificates of Proficiency.
- > Across the state, the student success rate—defined as the number of students who complete a program or are retained from fall to fall—is more than 10 points higher than for other community college students.

Over the long term, the initiative is vulnerable to federal funding shifts, and TANF block grants have decreased in recent years. Nevertheless, Arkansas has preserved Career Pathways: It is one of ten programs selected in 2011 to participate in the Promising Pathways Initiative sponsored by the U.S. Department of Health and Human Services, Administration for Children and Families, Office of Family Assistance. Other, mostly small programs formerly supported by TANF have disappeared in the state because they lacked data. Career Pathways has made the data visible across the state and in Washington, DC.

ENDNOTES

¹ For more information on Virginia, see Asera (2011) and <http://rethink.vccs.edu>.

² Gretchen Schmidt is now a program director for postsecondary state policy at Jobs for the Future.

³ See, for example: Slavin (2011), Parcell (2012), and Sternberg et al. (n.d.).

⁴ For more information, see: <http://www.shifting-gears.org>.

⁵ Source: <http://rethink.vccs.edu>.

⁶ Results were reported in an email exchange with staff of the Washington State Board for Community and Technical Colleges. See also Wachen et al. (2012).

⁷ See, for example, <http://www.cdc.gov/violenceprevention/overview/social-ecologicalmodel.html>, and Bronfenbrenner (1994).

REFERENCES

- Asera, Rose. 2011. *Innovation at Scale: How Virginia Community Colleges Are Collaborating to Improve Developmental Education and Increase Student Success*. Boston, MA: Jobs for the Future.
- Asera, Rose. 2008. *Change and Sustain/Ability: A Program Director's Reflections on Institutional Learning*. Stanford, CA: Carnegie Foundation for the Advancement of Teaching.
- Bloom, Paul N. & Aaron K. Chatterji. 2009. "Scaling Social Entrepreneurial Impact." *California Management Review*. Vol. 51, No. 3.
- Bronfenbrenner, Urie. 1994. "Ecological Models of Human Development." In *International Encyclopedia of Education*, Vol. 3, 2nd ed. Oxford, UK: Elsevier.
- Bumba Jr., Russell P. 2002. "State Systems of Coordination: A Primer for Student Affairs." *New Directions for Student Services*. Issue 100.
- Coburn, Cynthia. 2003. "Rethinking Scale: Moving Beyond Numbers to Deep and Lasting Change." *Educational Researcher*. Vol. 3, No. 6.
- Cordingley, Philippa & Miranda Bell. 2007. *Transferring Learning and Taking Innovation to Scale*. Coventry, UK: Centre for the Use of Research and Evidence in Education.
- Dede, Chris. 2006a. "Scaling Up: Evolving Innovations Beyond Ideal Settings to Challenging Contexts of Practice." In R.K. Sawyer, ed., *The Cambridge Handbook of Learning Sciences*. Cambridge, UK: Cambridge University Press.
- Dede, Chris & Clarke, Jody. 2006b. "Robust Designs for Scalability." Paper provided for discussion at the AECT Research Symposium, June 22-25, Bloomington, Indiana.

- Elmore, Richard. 1996. "Getting to Scale with Good Educational Practice." *Harvard Educational Review*. Spring.
- Hassel, Bryan C. & Lucy Steiner. "Strategies for Scale: Learning from Two Educational Innovations." *Innovations in American Government Occasional Paper 6-00*, John F. Kennedy School of Government, Harvard University.
- McDonald, Sarah-Kathryn, Venessa Ann Keesler, Nils J. Kauffman, & Barbara Schneider. "Scaling-up Exemplary Interventions." *Educational Researcher*. Vol. 35, No. 3.
- McGuinness, Aims C. 2003. *Models of Postsecondary Education Coordination and Governance in the States*. Denver, CO: Education Commission of the States.
- Parcell, Abby 2012. *More to Most: Scaling Up Effective Community College Practice*. Durham, NC: MDC.
- Public Agenda and Achieving the Dream. 2011. *Scaling Community College Innovations*. New York, NY: Public Agenda.
- Rogers, Everett. 1962. *Diffusion of Innovations*. New York, NY: The Free Press.
- Scaling Innovation. 2012. "Adoption and Adaptation: A Framework for Instructional Reform." *Inside Out*. Vol. 1, No. 2.
- Robert Slavin. 2011. "How Education Innovation Can Thrive at Scale." *Education Week Blog*. December 8. Available at: http://blogs.edweek.org/edweek/sputnik/2011/12/how_education_innovation_can_thrive_at_scale.html
- Sternberg, Robert J., Damian Birney, Linda Jarvin, Alex Kirlik, Steven Stemler, & Elena L. Grigorenko. n.d. "Scaling Up Educational Interventions." Unpublished manuscript. Available at: http://www.prism.gatech.edu/~af7/Psyc%206018/6018%20-%20HO's/Scaling_Up_Chapter.pdf
- Wachen, John, Davis Jenkins, Clive Belfield, & Michelle Van Noy. 2012. *Contextualized College Transition Strategies for Adult Basic Skills Students: Learning from Washington State's I-BEST Program Model*. New York, NY: Community College Research Center.
- Washington State Board for Community and Technical Colleges. 2005. *Building Pathways to Success for Low-skilled Adult Students: Lessons for Community College Policy and Practice from a Longitudinal Student Tracking Study*. Olympia, WA: Author.
- Westley, Frances & Nino Antadze. 2009. "Making a Difference: Strategies for Scaling Innovation for Greater Impact." *The Innovation Journal: The Public Sector Innovation Journal*. Vol. 15, No. 2.



JOBS FOR THE FUTURE

TEL 617.728.4446 FAX 617.728.4857 info@jff.org

88 Broad Street, 8th Floor, Boston, MA 02110
122 C Street, NW, Suite 650, Washington, DC 20001

WWW.JFF.ORG

