

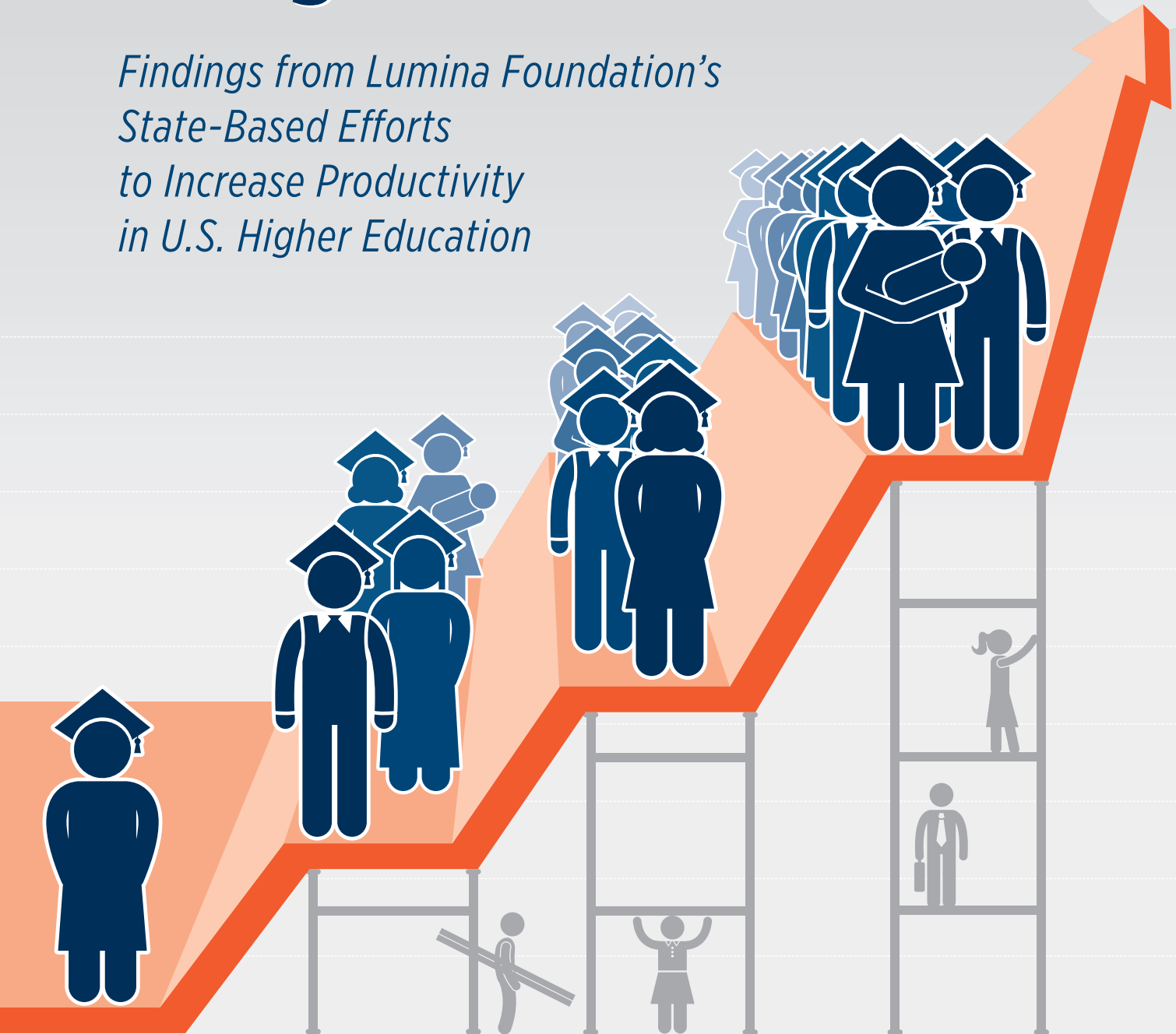
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# Improving the Yields in Higher Education

GOAL  
2025

*Findings from Lumina Foundation's  
State-Based Efforts  
to Increase Productivity  
in U.S. Higher Education*



Social Program Evaluators  
and Consultants, Inc.

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# Executive Summary



**Lumina Foundation** since its inception has led a nationwide charge to increase educational attainment in the United States by expanding affordable opportunities for student success in higher education. By 2009, this work coalesced around an overriding target that Lumina identified as Goal 2025: To increase the proportion of working-age Americans with postsecondary degrees, certificates, and other credentials to 60% by the year 2025. Growing numbers of policy, education, and business leaders have joined this pursuit. The work is **crucial for Americans**, to gain the knowledge and skills to compete in the global job markets of the 21st century; **vital for our communities and states**, to strengthen their economies and civic opportunities; and **fundamental for society**, to extend the full benefits and responsibilities of democracy to an increasingly diverse populace.

As colleges and universities have worked to increase student success and graduations, they have faced significant fiscal challenges over the past decade. They have also served increasingly diverse student populations. To address these and other challenges, Lumina became the first national private foundation to provide significant support to states interested in exploring how to increase productivity in higher education—defined as graduating substantially more students within available financial resources while maintaining access and educational quality. Lumina supported this work in the midst of turbulent financial times, aware that higher education in the United States is an enormously complex enterprise, with different historical contexts, political structures, governance systems, and institutional configurations in each state.

## What is Productivity in Higher Education?

To meet the Big Goal of raising college attainment rates to at least 60%, Lumina and its national partners determined that productivity improvement in higher education must include the following:

- Substantial increases in the number of degrees and certificates produced,
- At lower costs per degree awarded,
- Without sacrificing the goals of access and equity,
- While maintaining (and even improving) quality.

Source: Lumina Foundation, *Navigating the New Normal*, Lumina National Productivity Conference (Indianapolis: 2010), p. 6.

The work began with the launching of Making Opportunity Affordable in 2005, which was a loosely defined initiative that brought together national and state partners to examine college costs. Lumina focused more sharply on higher education productivity in 2008, when 11 states received one-year planning grants. Seven of those states received four-year implementation grants starting in November 2009: **Arizona, Indiana, Maryland, Montana, Ohio, Tennessee, and Texas**. This report identifies early outcomes and implications of the work in these seven states, by examining changes in higher education policies and programs at the state and system levels between 2008 and 2013.

Lumina's productivity work focused primarily on helping state policymakers and higher education leaders determine how to work within resource constraints to achieve Goal 2025. The efforts succeeded in supporting state leaders in developing new policies and programs designed to increase higher education productivity. The most substantial policy and program growth was in performance funding and strengthening student pathways and transitions. In both of these areas, there were reports of changes in institutional behaviors as well as state-level policy reforms. Challenges that lie ahead for states include identifying changes in student success over time and bringing successful practices to scale, while addressing fiscal and demographic issues facing public higher education.

## How the Work Was Accomplished

Lumina's productivity work sought to identify, share, and build on innovative policies and programs in the seven states. The foundation engaged state policymakers, higher education leaders, business leaders, and national experts in the initiative—and drew from their experiences to shape the work. As well as providing grants to states, Lumina worked with HCM Strategists, a national public policy firm, to create a Strategy Labs Network. The Strategy Labs became the initiative's vehicle for delivering technical assistance, engagement, and support to state policymakers and higher education leaders.

**The concept was timely.** Lumina's emphasis on productivity was well timed for gaining traction with state policymakers and system leaders, partly because of the Great Recession. As state revenues were dropping, productivity was an attractive concept to policymakers seeking to preserve higher education and workforce training even as they decreased funding for institutions. Productivity as a term was not as useful on college campuses, though many of its underlying concepts—such as improving student pathways, increasing student success, and holding down administrative costs—were well-received.

## What are Strategy Labs?

The Strategy Labs were created to provide policymakers and higher education officials with better opportunities to connect with peers from other states to share, identify, and pursue strategies to ensure that more students complete college within existing resources. States participating in the Strategy Labs form a network of leaders advancing higher education public policies and innovative practices to increase productivity in higher education. Members of the network have access to nonpartisan research, policy expertise, and public engagement resources that are available in real-time and tailored to the needs of the state. The network is strengthened by the sharing of ideas online.

## Findings at a Glance

Lumina over the past decade helped state and national leaders share, identify, and pursue policies and programs designed to increase productivity in higher education. Between 2008 and 2013, the work featured:

- **Implementation grants** to support infrastructure and staff positions to advance the work in seven states.
- A **Strategy Labs Network** to provide technical support to policymakers and higher education leaders.

**The result?** A robust yield of state policies and programs, including reports of changes in institutional behaviors as well as state-level reforms:

-  **Performance funding policies** are spreading.
-  **Redesigns of academic delivery models** are multiple and varied.
-  Some **new student aid and tuition policies** support completion.
-  Few new **business efficiencies** were identified.

- **The multiple strategies worked.** Many grant programs seek to inform state policy development; the productivity initiative succeeded. The implementation grants and the Strategy Labs helped to support the development of policies and programs designed to increase productivity in higher education. For example, state leaders were particularly successful in developing new performance funding policies and strengthening student pathways.
- **Five roles contributed to change.** People and organizations serving in five roles were pivotal in facilitating change at the state and system levels: validators, champions, conveyors of information, connectors, and catalysts. The most difficult of these roles to sustain are connectors and catalysts, since they require state-specific knowledge, networking, and expertise.
- **Strategy Labs provided centralized support.** The Strategy Labs Network was important and timely in providing technical support to state policymakers and state higher education executive officers. If external support for the Strategy Labs were to end, it is likely the national network would also end.

- **Engagement of higher education institutions was important.** Authentic engagement of institutional leaders emerged as important for buy-in to create policies and programs.
  - **Implementation.** Implementation planning and support were generally separate from policy development. Many states increased their engagement of college administrators and faculty, through focus groups and dialogues designed by Public Agenda, a national nonprofit organization providing stakeholder engagement and research.
  - **Community involvement.** Some states engaged community stakeholders beyond higher education faculty and administrators, including business representatives, school district representatives, students, and state residents generally. These efforts were valuable, but most of the activity was limited.
- **Lack of national consensus on measurement.** Lumina funded several efforts to measure productivity, but these efforts did not yield consensus. Meanwhile, Lumina and its national partners linked productivity to increasing substantially the number of degrees and certificates produced, at lower costs per degree, while preserving access and academic quality. This description provided states with a general goal, but not a series of measures that might help them track progress, determine which costs should be included, or address persistent questions about academic quality arising from the work.

## What the Productivity Work Involved

With input from states and national partners, Lumina developed and refined a set of priorities called the “Four Steps to Finishing First in Higher Education.” States were asked to consider strategies aligned with these four areas: (Step 1) performance funding; (Step 2) student incentives, through tuition and financial aid; (Step 3) innovative models for academic delivery; and (Step 4) business efficiencies. The most substantial policy and program changes were in performance funding and innovative approaches for academic delivery.



**STEP 1. Performance-based funding is spreading.** The most substantial activities and changes involved providing nonpartisan research and education that led to the adoption of newer, outcomes-based funding policies—with notable reports of immediate and intermediate

The most substantial activities and changes involved providing nonpartisan research and education that led to the adoption of newer, outcomes-based funding policies—with notable reports of immediate and intermediate institutional effects.

institutional effects. Several issues bear watching in the states implementing performance-funding policies, including (1) whether the percentage of state funding of higher education that is dedicated to student outcomes is adequate to influence institutional behavior, and (2) whether the balance of measures in use create adequate incentives to meet statewide goals including, for example: completion by under-represented students, matching state workforce needs in critical fields, and successful transfer between institutions.

- **Substantial policy change.** **Indiana, Ohio, and Tennessee**, with their strong histories with performance funding, stand out for increasing the share of state funding linked to student outcomes (100% of public funding of higher education operations in Ohio and Tennessee) and revising their existing measures.
- **Modest success.** **Arizona, Montana, and Texas** did not have a strong history of performance funding, but saw modest success in passing performance funding legislation.
- **Some movement.** **Maryland** did not include performance funding in its grant goals, but the General Assembly directed the Higher Education Commission to develop performance-funding options.



**STEP 2. Some student aid and tuition policies were linked to completion.** Several states, systems, or institutions of higher education developed modest changes in tuition or financial aid policies that show promise in encouraging more students to graduate more quickly. However, broader trends continued to make college less affordable for low- and middle-income students, and student debt burdens grew.

- **Financial aid strategies** designed to incentivize completion included requiring students to maintain a higher grade point average to receive financial aid; allowing aid to cover summer terms; and withdrawing aid from those exceeding time limits for graduation.

- **Tuition strategies** included temporary tuition freezes; flat tuition over a period of continuous enrollment, or other guarantees; tuition caps per term, regardless of the number of credits taken; tuition surcharges for excess credits beyond those required to complete a degree; and tuition discounts for starting at a branch campus.



### **STEP 3. Redesigns to improve student pathways and transitions were multiple and varied.**

The productivity initiative was successful in supporting system-wide improvements in student experiences and transitions—such as developing new student pathways, redesigning courses, program Tuning, and establishing transfer/articulation agreements. What were innovative, in most cases, were not brand new initiatives. Rather, innovation occurred by repurposing existing programs and delivering them in new or expanded ways across new settings.

- **The range of activities.** All seven states engaged in multiple activities in this area, and the work fell into four categories: (1) high school-based accelerators such as dual enrollment; (2) improved remediation and course redesign; (3) improved supports for transfer from two- to four-year institutions; and (4) strategies for quicker completion, such as predictive analytics, prior learning assessment, and competency-based programs.
- **State-branded models of Western Governors University.** Indiana, Tennessee, and Texas established or re-established state-branded competency-based education programs through Western Governors University.



### **STEP 4. Few new business efficiencies were identified.**

Over the past decades, successive cycles of state cutbacks in funding for public higher education, along with pressure to hold down tuition increases, caused many public colleges and universities to seek efficiencies across their operations. The productivity work sought to build on and scale these efforts, with some progress in data collection and information sharing across institutions, but limited success otherwise.

## **Implications for College Completion**

Several challenges remain for states seeking to increase completion of degrees and certificates, including identifying the interventions that are most successful in improving student outcomes, and bringing those practices to scale statewide. Lumina expanded its Strategy Labs Network to assist state efforts in increasing educational attainment. Key questions remain: What is working, where is it most effective, and for whom does it increase degree completion?

In addition, states and colleges face significant fiscal and demographic challenges. The declines in state appropriations to higher education per student over the past 30 years, combined with tuition increases and other factors, have made college less affordable for low- and middle-income students. Over the grant period, the initiative's short-term policy gains have not been joined by increased public investments to raise college attainment rates substantially. Stronger evidence that links policy changes to student success and degree completion may be beneficial in identifying smart state investments in higher education. In this context, Lumina's work to create a Goal 2025 social movement to increase attainment is well timed. States and the nation could benefit from targeted public will-building to reframe who pays for higher education into a discussion of how everyone gains from higher education—including 21st century children, adults, seniors, and businesses. These engagement efforts can be spurred by student outcomes from the productivity work, as those outcomes emerge in states. Improving the yields of higher education benefits everyone—by increasing individual knowledge and skills, advancing workforce preparation, and creating a more informed citizenry.

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# Chapter 1



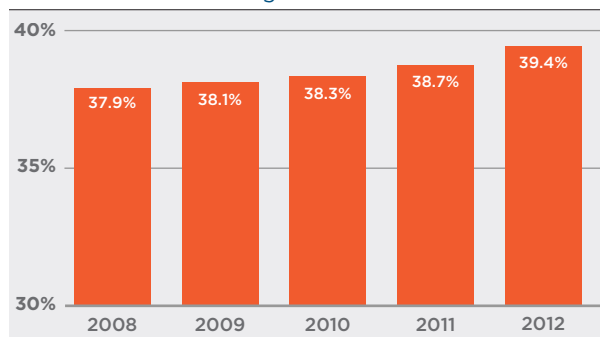
## Goal 2025 and the Pursuit of Greater Productivity in Higher Education

**60%  
2025**

Since its inception, Lumina has led a nationwide charge to increase educational attainment in the United States by expanding affordable opportunities for student success in higher education.<sup>1</sup> By 2009, this work coalesced around a major target that Lumina identified as Goal 2025: To increase the share of working-age adults with postsecondary degrees, certificates, and other credentials to 60% by the year 2025.

Based on recent estimates, the proportion of Americans (ages 25 to 64) with a two- or four-year college degree ticked up by a percentage point and a half from 2008 to 2012—from about 38% to over 39% (see Figure 1). This incremental rise reveals the audacity of Lumina’s Goal 2025; the attainment rate is rising steadily, but reaching 60% will require a series of much larger jumps.<sup>2</sup>

**Figure 1:** Percentage of U.S. Adults (ages 25 to 64) with at least an Associate Degree



Source: Lumina Foundation, *A stronger nation through higher education* (2014).

As part of its efforts to spur educational attainment, Lumina in 2005 launched Making Opportunity Affordable, a loosely defined initiative focused on college costs. By 2008, the work evolved into a multistate grant initiative to increase productivity in higher education (see Timeline, next page). Lumina awarded planning grants to 11 states in December 2008 and four-year implementation grants to seven of those states in November 2009: Arizona, Indiana, Maryland, Montana, Ohio, Tennessee, and Texas. Through this work, Lumina became the first national private foundation to provide sustained resources to multiple states to increase productivity in higher education.

This report identifies early outcomes and implications of Lumina’s efforts to increase

productivity in higher education, by examining changes in state and system-level policies and programs. As the following pages describe, the work succeeded in supporting state leaders in developing policies and programs designed to increase productivity in higher education. Looking forward, states seeking to build on these accomplishments face several challenges and opportunities, including identifying the interventions that are most successful in improving student outcomes, and bringing those practices to scale statewide.

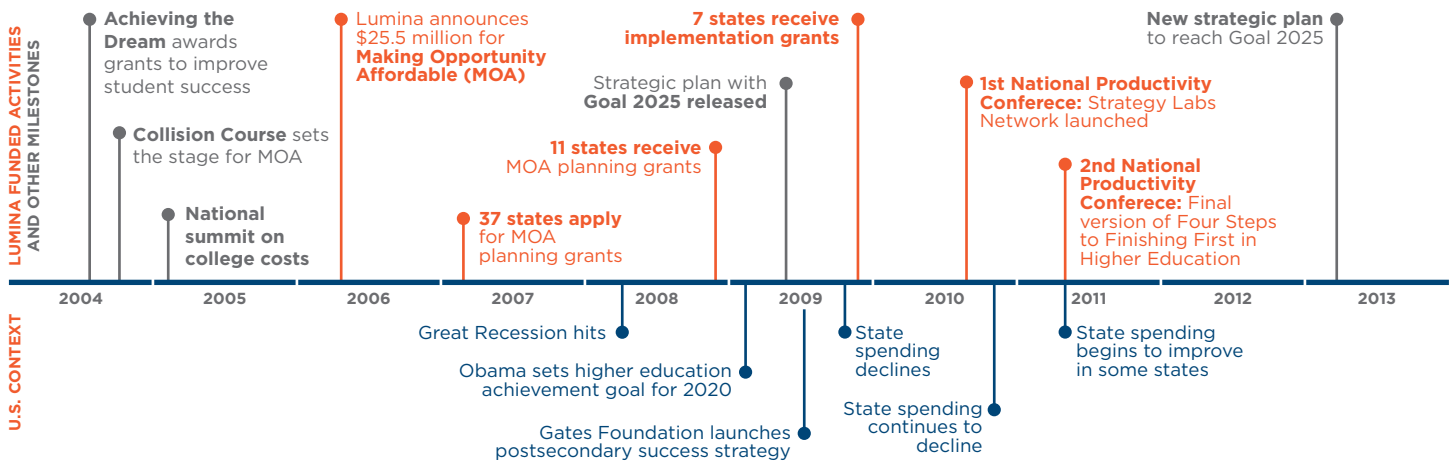
### The Context of a National Recession

Three concepts undergirded Lumina’s pursuit of greater productivity in higher education: (1) increasing the number of college degrees and certificates conferred while (2) holding down costs and (3) maintaining (or increasing) access and educational quality.<sup>3</sup> The joining of these concepts under a productivity banner gained traction in the states during the Great Recession as expectations for higher education were mounting and public resources were plummeting. In 2009, President Barack Obama set a national goal that by 2020 the United States would have the highest proportion of college graduates in the world;<sup>4</sup> Lumina established its Goal 2025; and the Bill & Melinda Gates Foundation launched its postsecondary success strategy to substantially increase the share of U.S. residents with a college degree or certificate.

1 • Findings from Lumina Foundation’s Productivity Initiative



## Timeline for Lumina's Productivity Work



Meanwhile, state spending for all purposes dropped in fiscal years 2009 and 2010, the first consecutive annual declines since such figures were reported by the National Association of State Budget Officers.<sup>5</sup> As state funding of higher education fell, the idea of finding greater productivity in higher education was appealing. State policymakers sought ways to preserve workforce education and training even as they reduced funding of higher education, and college and university leaders needed ways to help more students succeed even as institutions were receiving less funding from states.

### Breaking New Ground





From the outset, Lumina's productivity work sought to break new ground by identifying, sharing, and building on innovative policies and programs in the states. Lumina and its partners engaged state policymakers, higher education leaders, business leaders, and national experts in the initiative—and drew from their experiences to shape the approach and the content of the work.

**The strategic approach.** As well as providing grants to states, Lumina worked with HCM Strategists, a national public policy firm, to create a Strategy Labs Network during the initiative. The Strategy Labs became the initiative's vehicle for delivering nonpartisan technical assistance, engagement, and support to state policymakers and higher education leaders.

**The content of the work.** Based on input from the states and from national partners, Lumina also developed and refined a set of state and system-level priorities to increase higher education productivity. This agenda for change became known as the "Four Steps to Finishing First in Higher Education." Using this blueprint, states were asked to consider strategies aligned with four specific areas:

### What are Strategy Labs?

The Strategy Labs were created to provide policymakers and higher education officials with better opportunities to connect with peers from other states to share, identify, and pursue strategies to ensure that more students complete college within existing resources. States participating in the Strategy Labs form a network of leaders advancing higher education public policies and innovative practices to increase productivity in higher education. Members of the network have access to nonpartisan research, policy expertise, and public engagement resources that are available in real-time and tailored to the needs of the state. The network is strengthened by the sharing of ideas online.

-  **1. Performance funding:** Targeted incentives for colleges and universities to graduate more students with high-quality degrees and credentials.
-  **2. Student incentives:** Strategic use of tuition and financial aid to incentivize course and program completion.
-  **3. New models:** Lower-cost, high-quality approaches substituted for traditional academic delivery whenever possible to increase capacity for serving students.
-  **4. Business efficiencies:** Business practices that produce savings to graduate more students.<sup>6</sup>

## Terminology

In this report, the term “state leaders” refers to state policymakers, higher education leaders, and business leaders. The term “state policymakers” refers to Governors, legislators, state analysts, and their staff at the state level. The term “higher education leaders” refers to state higher education executive officers, system-level administrators and staff, and institutional administrators and faculty.

Since Lumina began its productivity work, pressures on public higher education have been accelerating. Student populations are growing more diverse, with large gaps in achievement by ethnicity and income. Public higher education serves larger numbers of first-generation college students, students speaking English as a second language, underprepared students, low-income students, and adults. Advances in technology and innovations in teaching and learning are transforming how colleges and universities create and share knowledge and how they deliver information to students. The states’ fiscal outlook has rebounded somewhat, but the appropriate level of state funding for colleges and universities remains contested; higher education is increasingly regarded as a private rather than a public good, and the run-ups of tuition and fees continue to limit access for low-income students.

In this national context, the implications of Lumina’s productivity work are substantial as more states seek to increase the share of residents with college degrees and certificates. Early outcomes from the initiative are both promising and daunting; they offer opportunities to inform policy and program change in the states, but they suggest formidable challenges ahead.

## About this Evaluation

In 2008, Lumina engaged SPEC Associates (SPEC) to evaluate its productivity investments through exploring this over-arching question:

***What public will building, advocacy, public policy changes, and system or statewide practices are likely to impact higher education productivity for whom and in what circumstances, and which of these are likely to be sustainable, transferable, and/or scalable?***

SPEC’s individual state reports examine the productivity-related accomplishments in each state during the grant period. A technical report provides a detailed summary of the work across the seven states. This report presents the evaluation team’s major conclusions about potential impacts and implications. All reports are available at [www.specassociates.org](http://www.specassociates.org).

It is too soon to assess broad changes in institutional or student behaviors stemming from the productivity work, but we have observed some shifts. It is also too soon to expect changes in degree production. Rather, this report examines, as outcomes, state and system-level policy and program changes that are designed to increase productivity in higher education. The productivity initiative did not support or oppose specific legislation, but rather worked to inform policymakers and higher education leaders on a nonpartisan basis, to share ideas and strategies, to support information campaigns and the work of state champions, and otherwise to catalyze policy and program improvement to increase productivity in higher education. We recognize that Lumina’s investments were one of many factors that contributed to the states’ work, and that Lumina made investments outside the initiative that may have contributed to the states’ accomplishments. For the evaluation’s methodology, see Appendix II.

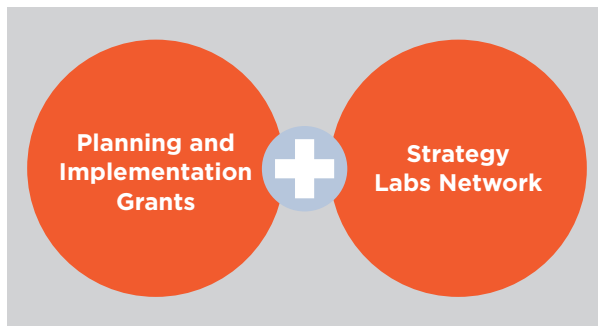
# Chapter 2



## The Strategic Approach: Implementation Grants and the Strategy Labs Network

During the first years of the productivity work, Lumina used a collaborative grant-making approach of providing planning and then implementation grants to state teams, while working with national partner organizations to provide technical support to the states. In 2010, Lumina launched a new dimension called the Strategy Labs Network. Compared with traditional grant making in which grants are conferred at the start and progress identified at the end of the grant period, the Strategy Labs provided a flexible way throughout the grant period to identify, support, and engage with state policymakers and higher education leaders to create change.

### Lumina's Strategic Approach



### Planning and Implementation Grants

Lumina's goal for the planning grants was to collaborate with 11 states in what became labeled "a learning year" in which "governors, legislators and leaders of colleges and universities will refine and develop strategies to increase productivity and explore policy changes and innovations."<sup>7</sup> Lumina partnered with intermediary organizations to manage grant activities, develop public outreach, and support internal communications networks for the grantees, including an online Knowledge Collaborative to facilitate information sharing and collaboration among state teams and national partners.<sup>8</sup> Every state had an advisor at the start to help guide planning activities, which

included a policy audit and a communications assessment and outreach plan. The process culminated in the creation of an implementation plan for increasing higher education productivity.

When the implementation grants to seven of these states were announced in 2009, Lumina directed the initiative as it continued to partner with national organizations to manage the work. Within each state, the work was structured through state teams and organized by a team lead or coordinator (see State Grant Teams box below). Primary activities funded by the grants included salaries of the state team leads or coordinators, travel and meeting costs, public outreach campaigns, studies, task force reviews, and policy briefs. Each state continued with an HCM advisor who served as liaison among the state team, HCM Strategists, and Lumina. Technical assistance was also available to states.

### State Grant Teams

State team membership reflected the work's focus on state and system-level policy and program change:

- All seven state teams included representatives from the state's higher education executive officers or the governing board.
- Four teams included Governor's Office staff.
- Four teams included the business community.
- Two teams included legislators or legislative analysts.
- One team included faculty.

*Note: Members of subcommittees and advisory teams are not included above. There was no formal representation from parents or students on the teams.*

## Strategy Labs Network

Lumina developed the idea of the Strategy Labs Network in conjunction with HCM Strategists in 2010, as a way for all 11 planning-grant states to stay informed about and engaged in the productivity work. As the Strategy Labs were implemented, they became a platform for delivering technical assistance, engagement activities, information sharing, and convenings. Over time, other states were included in the Strategy Labs, bringing the total to 26 states by the end of 2013. This report focuses on the seven implementation-grant states.

**Purpose.** The Strategy Labs were managed by HCM Strategists and sought to inform and support policy change by: (1) identifying opportunities within each state to address one or more of the Four Steps; (2) engaging with state leaders who were interested in and able to act on the productivity agenda; and (3) delivering technical assistance, nonpartisan research and information, networking, and other resources to inform and support the work of those state leaders.

**Participants.** The Strategy Labs sought out state policymakers, higher education leaders, and business leaders who appeared best positioned and disposed to advance higher education productivity, particularly legislators and their staff, the Governor's Office, and state higher education executive officers and their staff. College and university leaders, including faculty, were included when work at the institutional level was a priority for the state, such as in course redesign, pathway development, and business efficiencies. State policymakers and higher education leaders also applied for Strategy Labs resources, which included participation in cross-state site visits and in-state technical assistance.

**Organization.** Each of the Four Steps was considered a distinct Strategy Lab managed by a policy lead who provided information and networking across the states. In addition, a director worked across all four Strategy Labs to advance networking among policymakers, to cross-pollinate ideas, and to connect state leaders with resources and experts outside their state. The policy leads and the director were staff members at HCM Strategists. Policy leads—working with Lumina, other staff at HCM Strategists, and state contacts—determined where and when to dedicate resources and which state leaders to include in activities.<sup>9</sup> The team at HCM Strategists had direct policymaking and programming experience on campuses, in state capitals, with coordinating boards, and at the federal level.

## Strategy Labs Resources Available to States

Strategy Labs activities included telephone, online, and in-person meetings with individuals and groups; convenings within states, across states, and nationally; and nonpartisan research and information, such as policy briefs, reports, and state-specific analyses. HCM Strategists served as the primary conduit of technical assistance in the states, and other national organizations provided resources through the Strategy Labs. Many organizations contributed to the states' work. Overall, organizations supporting the Strategy Labs included:

- **HCM Strategists:** National intermediary for the productivity policy work; managed the advisors in the seven states; provided policy experts, technical assistance, report writing; and organized cross-state convenings.
- **Public Agenda:** National intermediary for engaging college and university leaders, faculty, and staff in efforts to increase productivity. Provided research, stakeholder engagement and capacity-building assistance to elevate the voices of students, faculty, employers and institutional practitioners to support states' progress.
- **SPEC Associates:** National evaluation firm, providing real-time insights used to develop and manage the work across states.
- **National Governors Association Center for Best Practices:** Advised the intermediaries and developed a set of high-level metrics for policymakers to evaluate the return on public investments in higher education.
- **Institute for the Study of Knowledge Management in Education:** Provided workshops for change and hosted the online Knowledge Collaborative to facilitate information sharing and peer learning.
- **Catalytica:** Facilitated the use of video-based stories for individual, organizational, and community transformation.

## Findings: The Initiative's Strategic Approach

**1. THE MULTIPLE STRATEGIES WORKED.** The initiative's multiple methods helped state policymakers and system leaders become informed about and create policies and programs designed to increase productivity in higher education.

Many grant programs seek to inform state policy development; the productivity initiative succeeded. The initiative's multiple methods, delivered through grants and the Strategy Labs Network, served as scaffolding that supported policy and program development in the states.<sup>10</sup>

**Planning and implementation grants.** State policymakers and higher education leaders described the planning and implementation grants—a total of about \$11 million over five years—as important in building consensus and providing fiscal resources, during a state budget crisis, to advance productivity. The grants raised public awareness about the concept of productivity in higher education, provided credibility for the work, and supported staff positions (including state team coordinators) that were described in some states as instrumental in providing cohesiveness and direction. Most states also used the grants to leverage other resources, including from Lumina, the federal government, or other foundations.<sup>11</sup>

**Strategy Labs Network.** Each state used Strategy Labs resources to inform state leaders and engage them in networking and other activities to support policy and program change. State leaders described the cross-state site visits, national convenings, and access to experts and peers in other states as particularly important in broadening and informing their own state's options. Site visits were peer-learning opportunities for policy and higher education leaders to address specific productivity policies within their states. The states' participation in Strategy Labs activities, based on a rough calculation of "touches" from HCM Strategists, was relatively even (see Table 1, which includes a definition of "touch"). Among the Four Steps, performance funding received the most attention (a third of the touches), followed by new models (27%) and student incentives (25%).

### ALIGNMENT WITH EXISTING STATE GOALS SPELLED SUCCESS; IN SOME CASES, THE INITIATIVE ALSO HELPED CREATE POLITICAL WILL FOR CHANGE.

Three of the Four Steps emerged from priorities in the states' grant proposals to effect changes in the supply of higher education—through performance funding (Step 1), new academic delivery models (Step 3) and business efficiencies (Step 4). Student incentive reforms (Step 2) were not as frequently mentioned in the grant proposals and were added to stimulate student demand in ways that would encourage completion—through tuition, fees, and financial aid policies.

**Table 1:** Number of Touches\* by the Strategy Labs Network, by State and Step

State	Step 1 Performance Funding	Step 2 Student Incentives	Step 3 New Models	Step 4 Business Efficiencies	Total	% of Total
Arizona	12	3	7	3	25	11%
Indiana	11	12	10	8	41	17%
Maryland	15	9	8	3	35	15%
Montana	10	8	14	5	37	16%
Ohio	13	6	9	8	36	15%
Tennessee	10	9	5	2	26	11%
Texas	8	12	12	6	38	16%
<b>Total</b>	<b>79</b>	<b>59</b>	<b>65</b>	<b>35</b>	<b>238</b>	<b>100%</b>
<b>% of Total</b>	<b>33%</b>	<b>25%</b>	<b>27%</b>	<b>15%</b>	<b>100%</b>	

\* Touches are activities of variable length and depth in which state leaders participated through HCM Strategists, including: phone meetings, national meetings, cross-state site visits, and meetings within states.

Note: Red numbers represent the highest area of touches for the state.

Source: HCM Strategists.



## Productivity Work: One of Many Factors Contributing to State Accomplishments

In this report, we highlight state accomplishments that are aligned with Lumina's productivity goals. We recognize, however, that the initiative was one of many factors that contributed to the states' work, and that Lumina made investments outside the initiative that may have contributed to the states' accomplishments. Other foundations, initiatives, and organizations also worked with the states on similar goals during this period. In this complex environment, the states' actions were not solely the result of their participation in the initiative.

The initiative appeared to be most successful when state needs and priorities were aligned with the Four Steps. The most substantial policy and program changes were in performance funding and new models (see Chapter 4), two areas in which the states concentrated their initial work. The fact that state priorities, Strategy Labs touches, and state policy action tended to be aligned is not surprising, given that (1) Lumina selected states, through its grant making, whose priorities for increasing productivity in higher education were consistent with many of its own, (2) the initiative's priorities evolved from input from these states, and (3) the Strategy Labs were designed to identify opportunities for action and provide assistance to state leaders best disposed to move the state's work forward.

There are numerous examples in which Strategy Labs activities informed state actions, including:

- Many states reported that learning about **Tennessee's** experiences with performance funding expanded their options for state policy development.
- A higher education leader in **Ohio** participated in a conference call and came away with the basics for a marketing plan focused on transfer students.
- A higher education leader from **Montana** at a site visit learned about an innovation to improve efficiency (called service blueprinting) and implemented the process at his institution.

There were also some important instances in which engagement with initiative resources appeared to turn the tide toward new actions. Perhaps the best example is **Maryland**, where Strategy Labs resources helped expand the state's attention toward programs and financial aid to help adults with some college credits—referred

to as “near completers”—finish their credential. Likewise, **Ohio** leaders credited the productivity initiative with helping to focus attention on statewide standards for prior learning assessment, a strategy to help adults gain college credits for their work experience and knowledge.

**2. FIVE MAIN ROLES CONTRIBUTED TO CHANGE.** For individuals and organizations, five roles emerged as crucial in informing and jump-starting state action: validators, champions, conveyors of information, connectors, and catalysts.

People and organizations served five main roles that were instrumental to the productivity work: validators, champions, conveyors of information, connectors, and catalysts. As a nationally recognized foundation, Lumina and its staff served primarily as validator and champion, though it also added value in other roles. In most states, the state team coordinators, state advisors, and Strategy Labs policy leads served as conveyors of information, connectors, and catalysts. The national partner organizations—such as HCM Strategists, Public Agenda, Catalytica, and the Institute for the Study of Knowledge Management in Higher Education—served as conveyors of information and connectors.

**Validators** provided credibility and accountability for the work. Higher education leaders in several states said that having Lumina's name attached to the work added credibility to their state's productivity efforts and that the grant provided them with “cover” to try innovative approaches. For example, the accountability demanded in the grant agreement reportedly gave stakeholders permission to undertake controversial challenges that were outside the norm of the state's typical policy options. Experts from outside the states were also described as influential in validating the importance of the productivity work to state and higher education administrators.

**Champions** publicly and privately supported the concept of productivity or specific aspects of the Four Steps. Lumina served as the principal champion across states, through its funding, media campaigns, and other efforts. Lumina staff also traveled to states to publicize and support state efforts.<sup>12</sup> In addition, the productivity initiative identified and supported many high-profile champions within states, and the Strategy Labs built on the expertise of these champions

by highlighting their work in site visits with other states. For example, the chancellor of the University System of Maryland spoke nationally about the impact of **Maryland's** effectiveness and efficiency efforts in staving off state budget cuts to higher education. In addition, the Governors of six states—**Arizona, Montana, Indiana, Maryland, Ohio, and Tennessee**—championed productivity issues in their state-of-the-state speeches over the past several years. In **Tennessee**, gubernatorial championing of productivity issues was bipartisan, endorsed by the state's current Republican Governor as well as his Democratic predecessor.

**Conveyors of information** provided practical expertise and nonpartisan information that broadened the knowledge of state leaders. States used the Strategy Labs, in particular, to access information from policy leads, state advisors, national partners, and peers in other states. For example, a policymaker in **Arizona**, after learning more about reverse transfer policies in other states, used that information to propose new reverse transfer policies for Arizona. States also received information through the online Knowledge Collaborative and from reports funded by the initiative. Higher education leaders described as particularly useful the research on academic spending by the Delta Cost Project at the American Institutes for Research;<sup>13</sup> the Lumina-commissioned *Navigating the New Normal*, which was developed to help policymakers make better decisions during the recession; and Public Agenda's reports on engaging institutional stakeholders, including *Campus Commons: What Faculty, Financial Officers and Others Think about Controlling College Costs*.

**Connectors** had access to networks of colleagues they drew from to convene the right people at the right time. Connectors in the states typically had extensive knowledge of their state, but many were national in scope (including Lumina staff) and linked state leaders to peers in other states who shared their expertise. State advisors, the Strategy Labs policy leads and director, the staff from national partner organizations (such as HCM Strategists and Public Agenda), and state team coordinators also served as connectors.

The initiative's national convenings enabled state leaders to connect both horizontally across states and higher education systems, as well as vertically within systems. The convenings and the state site visits were described as crucial for helping stakeholders achieve common goals.<sup>14</sup>

## State Advisors as Connectors

State advisors served important roles in connecting state leaders with Strategy Lab resources. Across the states, all but one of the advisors were higher education policy professionals in their own right and worked part-time as state advisors. The state advisors worked for HCM Strategists and were funded by Lumina outside of the state implementation grants.

- **Ohio** team members said that the 2011 National Productivity Conference enabled them to rethink their productivity agenda, which then led them to focus on prior learning assessment.
- **Texas** team members reported that the 2011 conference enabled them to network with legislators.
- Leaders in **Montana** said that broadening the mission of the state's two-year colleges would not have happened without the convening of stakeholders enabled by their grant.

**Catalysts** used all the above means to accelerate the implementation of concepts into policies and practices. This is likely the most complex of the five roles, requiring consistent support, local knowledge, national expertise, diplomacy, vision, persistence, and flexibility in action. State advisors, state team coordinators, and Lumina staff served as catalysts.

## State Team Coordinators as Catalysts

In four states, the state team coordinator or lead was described as having extensive experience in the state and serving a critical role in catalyzing action on the state productivity agenda:

- **In Arizona**, the team lead was a former community college president with a history of networking.
- **In Indiana**, the team co-lead was a former state senator and chair of the state Senate's higher education committee who went on to become the state's higher education commissioner.
- **In Montana**, the team lead was the deputy commissioner for two-year and community college education.
- **In Tennessee**, the coordinator was a former assistant to the previous Governor.



Many state leaders said that Lumina’s support accelerated the implementation of existing productivity efforts, including through the leveraging of additional resources. For example, Lumina’s grant helped **Texas** leverage other support for aligned efforts by the Bill & Melinda Gates Foundation, the Kresge Foundation, the Houston Endowment, and Educate Texas.

**CONNECTOR AND CATALYST ROLES ARE MORE DIFFICULT TO FULFILL AND SUSTAIN.**

While all five roles appear to be important for policy change, some are more difficult to fulfill than others. Many states have **champions** who actively advocate for policies or programs—in the Governor’s office, in the Legislature, and in higher education. Many states routinely look to external funding sources and consulting experts to serve as **validators** and as **conveyors of information**, particularly when developing innovative policies and programs. **Connectors** and **catalysts**, however, are less common and are more difficult to sustain, for several reasons. These roles often involve working to create change, which requires engaging others in activities beyond their comfort zones and job descriptions. They also generally require working inside a state for a substantial amount of time, rather than coming in temporarily, since they depend upon state-specific knowledge, networking, and expertise. For example, it took time for some state team coordinators and state advisors to grow into connector and catalyst roles during the grant period.

**3. STRATEGY LABS PROVIDED CENTRALIZED COORDINATION THAT WAS IMPORTANT AND TIMELY.** If external support for the Strategy Labs were to end, however, it is likely the national network would also end.

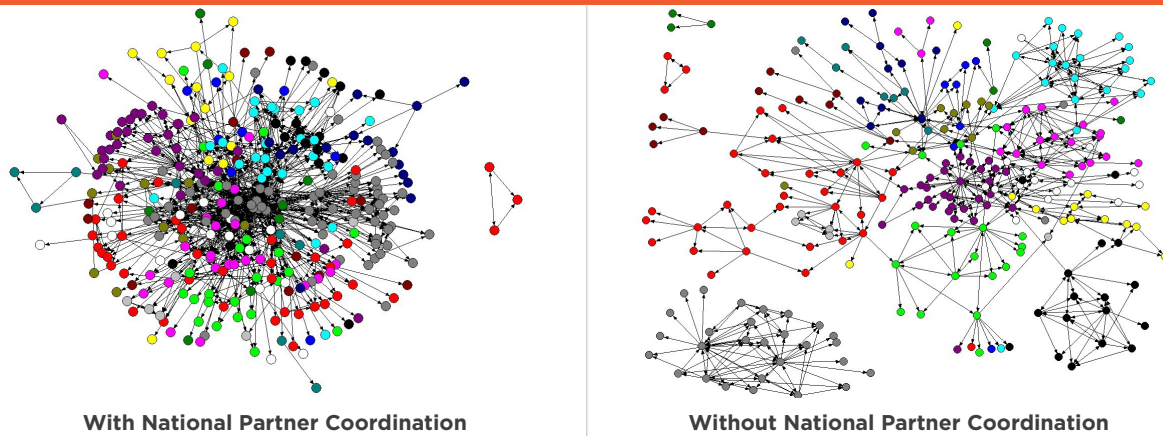
Networking can be considered as a continuum, with a loose network of individual actors at one end and a highly engaged community of practice at the other. In that light, the Strategy Labs Network can best be described as a loose network of individual state actors supported by external partners (see Figure 2). Without the conveying and connecting functions of the national partners, the Strategy Labs Network devolves to state leaders, who fall back on their own connections.

**STRATEGY LABS FAVORED CHAMPIONING, BUT ALSO SUPPORTED SOME BROAD-BASED LEADERSHIP.**

In supporting change, there is often a tension between using external or internal expertise. Using external expertise may result in some dependence on outside sources but can often bring quicker short-term results. The Strategy Labs used this tactic by bringing in substantial technical assistance and working with individual champions to inform policy and program development in the states.

**Figure 2: National Partners Essential to the Strategy Labs Network**

The diagrams below portray the relationships and connections among Strategy Labs participants, as reported by the participants. States are represented by the color of the dots. When national partner organizations are included, the network is well connected. When the national partners are removed, the connections break into clusters, organized largely by state.



Source: SPEC Associates, online survey of Strategy Labs Network participants.

Another common tension for change initiatives involves a choice between strengthening individual champions or broad-based leadership. Developing broad-based leadership in states typically takes longer and requires more resources, but also may be more sustainable for the long run. The chancellor of the **Ohio** Board of Regents was supported as an early champion of productivity. After a new Governor was elected, however, a turnover in the chancellor position meant that the state lost a strong champion and had to rebuild its productivity agenda.<sup>15</sup> Generally, the Strategy Labs focused on building champions, although the work within states also developed leadership in some cases. For example, Tuning **Texas**, a project to align student learning outcomes of courses and programs, and **Maryland**'s course redesign work are projects that developed collaborative faculty leadership.

#### **THE LACK OF PEER-TO-PEER NETWORKING ACROSS STATES MAY IMPACT THE STRATEGY LABS' SUSTAINABILITY.**

Sustainability generally falls into one or more of three categories:

- 1. Sustaining the ideas** associated with the work—for example, the idea that increasing productivity in higher education is needed to raise educational attainment in the state.
- 2. Sustaining the work's impacts or outcomes**—for example, the policies and practices that were implemented, and any impacts on student success that may result.
- 3. Sustaining the activities** associated with the initiative.<sup>16</sup>

The Strategy Labs Network contributed to the ideas associated with the initiative by promoting champions in the states, sharing their expertise about productivity issues with state leaders, and through other means. The Strategy Labs contributed to the work's impacts and outcomes by informing the development of policies that will likely last beyond the years of the initiative. As a set of activities, the Strategy Labs' use of national partners and other forms of external expertise, combined with their focus on promoting individual champions in the states, suggests that they will likely require external leadership and funding at a national level to continue.<sup>17</sup> The Strategy Labs were instrumental in delivering resources and spurring engagement and action, but they did not develop into a sustainable peer-to-peer network across states. If external support for the Strategy Labs were to end, it is likely the national network would also end.

**4. ENGAGEMENT OF HIGHER EDUCATION INSTITUTIONS WAS IMPORTANT.** Authentic engagement of college and university leaders was helpful in developing state policy, but gaining their support for policy change was sometimes difficult.

Several states increased and deepened their engagement with institutional leaders to achieve state policy change. These engagement strategies differed depending on state and political contexts, higher education leadership, histories of collaboration, and goals. That is, choosing whom to engage and determining the best methods of engagement depends on a range of factors for each state. The more extensive efforts solicited feedback during policy formulation and design stages, not just in the final stages of policy approval. In performance funding, for example, **Ohio** Governor John Kasich asked public college and university presidents to work with Gordon Gee, then-president of Ohio State University, to recommend revisions to the funding formulas. In **Indiana** and **Montana**, the higher education commissioner conducted a series of listening tours with higher education leaders and met with institutional presidents and chief financial officers to discuss performance-funding metrics. Both Ohio and Indiana had prior histories of performance funding, and the engagement efforts led to improvements to existing policies that, in turn, were supported by institutional leaders.

Working with institutional leaders to develop state policy, however, can be time-consuming and somewhat unpredictable, particularly when state priorities are not consistent with institutional aspirations. Higher education culture suggests that change is welcomed in some quarters and resisted in others. For example, when the **Texas** Higher Education Coordinating Board sought to develop performance-funding metrics, it solicited feedback from separate advisory committees for four-year universities and two-year colleges. The coordinating board also conducted listening tours with college and university leaders. By the time the Legislature took up the issue, however, support from the four-year institutions had eroded and the Legislature adopted performance funding only for the state's two-year community and technical colleges.

The importance of engaging institutional support can also be found in **Maryland**'s new College

The engagement strategies differed depending on state and political contexts, higher education leadership, histories of collaboration, and other factors. The more extensive efforts solicited feedback during policy formulation and design stages, not just in the final stages of policy approval.

and Career Readiness and College Completion Act. This act was created by state policymakers working directly with education leaders to address the state's workforce goals. A state leader said that the Completion Act could not have been developed prior to the grant because it would have been too contentious. Success was only assured when the momentum created by the state's newly adopted goal to increase educational attainment and the collaborative work of state policymakers and higher education leaders came together. Interviewees credited the state's grant-related work and the Strategy Labs convenings for these collaborative discussions.

#### **STATE POLICY DEVELOPMENT OCCURRED SEPARATELY FROM POLICY IMPLEMENTATION, BUT SOME STATES INCREASED THEIR IMPLEMENTATION PLANNING CAPACITIES DURING THE INITIATIVE.**

When a state's productivity work focused on institutional policies and programs (such as Tuning **Texas** and course redesign in **Maryland**), the state was more likely to involve college faculty and administrators in developing and implementing the new practices. This was the exception, however, since most productivity work focused on developing state and system-level policy and programs, and this work was largely separate from implementation planning and support. As noted earlier, the initiative generally supported champions and engaged high-level policymakers, rather than building distributed leadership among those who would be responsible for implementing the changes.<sup>18</sup>

**Maryland's** productivity work stands as an exception because (1) the state's course redesign project required direct faculty involvement, and (2) the state has a strong history of collaboration across systems of higher education, and between university leaders and state policymakers. Members of the grant team described their work as engaging directly with faculty to expand and spread academic innovations—efforts that built dispersed, collaborative leadership for change.

For example, the grant team structured its course redesign efforts as a mini-grant program that faculty applied for, adapted, and spread within their own academic programs. In engaging faculty directly in leadership roles, Maryland integrated policy implementation in its work.

Several states increased engagement of college administrators and faculty during the initiative, through dialogues designed by Public Agenda to advance strategic planning, implementation, and capacity building, among other purposes. Examples include focus groups and dialogues on regional campuses in **Indiana**, mission expansion and rebranding in **Montana**, articulation agreements in **Ohio**, and an open learning initiative in **Texas**. Texas saw faculty involvement in its Tuning of degree programs, but found that much work remains in spreading Tuning beyond those faculty and disciplines who were directly involved in the work. **Tennessee's** efforts to create adult-serving consortia among two- and four-year institutions and technical colleges had limited success.

#### **COMMUNITY AND STUDENT ENGAGEMENT WAS LIMITED BUT USEFUL.**

Some states engaged community members beyond higher education faculty and administrators, including business representatives, students, school district representatives, and, on a larger scale, state residents generally. These efforts were valuable, but most were limited. The broadest efforts were in **Montana**, which worked to inform stakeholder groups about the transformation of the state's technical colleges and two-year programs into comprehensive two-year institutions. Public Agenda facilitated listening tours and community gatherings to support these efforts. The Council for Adult and Experiential Learning worked with Public Agenda and others to gather and share the perspectives of adults about the accessibility of the University System to adult students. Also, Strategies 360, a communications firm, examined ways to encourage more adults to enroll in higher education.

Community and student engagement in other states included:

- **Arizona.** Three community colleges, with support from Public Agenda, planned and hosted community conversations on student success and productivity, in support of the 2010 strategic plan adopted by the community colleges.

- **Tennessee.** Public Agenda conducted interviews or focus groups with lower- and middle-income adults on barriers and contributors to college-going; with workforce leaders on attitudes of the business community about higher education; and with professionals in human resources about an employer toolkit designed to build relationships between colleges and employers.

- **Texas.** The state coordinating board worked with Public Agenda to gather information about the perspectives of students on retention, persistence and completion, to inform its college completion agenda.

**Takeaways from the Initiative’s Strategic Approach**

What’s promising?	What’s challenging?
<b>Grants + Strategy Labs.</b> The multiple approaches associated with the grants and the Strategy Labs were successful in informing and supporting policy change.	<b>Strategy Labs alone.</b> Without the implementation grants, will the seven states be as successful in moving productivity policies and programs forward?
<b>Five roles.</b> Individuals and organizations served five main roles in supporting state policy change: validators, champions, conveyors of information, connectors, and catalysts.	<b>Sustainability.</b> Will all five roles—particularly the connector and catalyst roles—be sustained after the grant period?
<b>Just-in-time support.</b> Strategy Labs offer a useful platform for informing and supporting state policy change.	<b>A network.</b> Will the states themselves see the value of peer-to-peer networking and invest their own resources?
<b>Engagement.</b> Engagement of higher education leaders was pivotal in developing policy.	<b>Implementation.</b> What planning, supports, and tracking are needed to ensure that implementation is broad and of high quality?

# Chapter 3

## The Agenda for Change: Productivity and the *Four Steps to Finishing First*

Since Making Opportunity Affordable first surfaced in 2005, Lumina’s productivity goals became more explicit and better defined, as it worked with states and with national experts to refine its approach. Lumina’s first efforts were heavily weighted toward controlling costs to enable greater access to higher education. Over time, a nuanced productivity agenda emerged, particularly in 2009, when *Four Steps to Finishing First* laid out the broad contours of the landscape and identified promising sets of policies and programs. This chapter provides evaluative conclusions about the agenda for change. Chapter 4 offers findings about each the Four Steps.

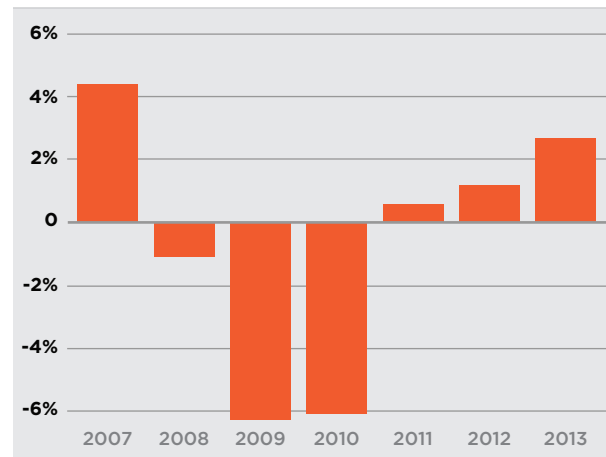
### Findings: The Initiative’s Agenda for Change

**1. THE CONCEPT WAS TIMELY.** Lumina’s emphasis on productivity was well timed for gaining traction with state policymakers and system leaders, partly because of the impacts of the Great Recession.

Economic pressures encouraged states’ interest in the productivity agenda. The Great Recession began in December 2007 and accelerated in 2008.<sup>19</sup> By the end of that year, when 11 states received planning grants to increase productivity in higher education, state policymakers and higher education leaders were already “anticipating significant cuts to public higher education.”<sup>20</sup> During this period, the concept of increasing productivity in higher education gained traction in state capitals, as state policymakers who reduced funding for higher education also sought ways to minimize the impacts of providing fewer resources. During the planning year, Lumina provided funding for state policymakers and higher education leaders to work together to consider and test innovative and “cost-saving methods of delivering high-quality education to greater numbers of students.”<sup>21</sup> In 2009, Lumina offered implementation grants totaling \$9.1 million to seven states, which enabled state leaders to implement their plans to develop policies and innovations to increase productivity in higher education.

Throughout the grant period, many state policymakers said that Lumina’s funding was critical to moving the work forward in their state, given the declining state revenues and the poor economy. They also emphasized that beyond grant funding, the concept of productivity was timely. As one state leader said, “The pressure is immense right now to make sure we are... getting the absolute best results we can for the dollars we spend.” Prior to the productivity work, many foundations and think tanks had focused on affordability in higher education and trying to hold down college costs. Many had also focused

**Figure 3: Percentage Change in Annual State Budgets from Prior Year**



Note: Figures are for 50 states, adjusted for inflation.  
Source: National Governors Association and National Association of State Budget Officers, *The Fiscal Survey of the States* (Washington, D.C.: Spring 2013), p. 2.



on increasing access to and student success in college. The productivity work helped state policymakers connect the fiscal issues with student outcomes—that is, focusing on holding down costs while also seeking to increase student completion.<sup>22</sup>

This shift toward productivity carried significant implications in the framing of higher education issues in state capitals. For example, access and affordability became important not just as goals in themselves, but rather as vehicles for increasing educational attainment in the state, and thereby improving the competitiveness of the state's workforce. In **Montana**, for example, state need-based financial aid could be discussed as an investment in the state's labor force rather than a program for low-income families.<sup>23</sup> In **Texas** and **Arizona**, existing efforts to improve articulation and increase transfers took on even greater importance statewide. Policymakers in several states recast funding of higher education as a vehicle to reward student completion, rather than simply rewarding enrollment.

#### **PRODUCTIVITY AS A CONCEPT WAS NOT AS USEFUL ON COLLEGE CAMPUSES.**

While productivity was an appealing concept in state houses, the term was often a barrier on campuses, primarily because it already has a wide range of connotations for higher education leaders, some of which are negative.<sup>24</sup> Productivity is often confused with cost efficiency. Consequently for many on college campuses, productivity in higher education is equated with efforts to have faculty teach more classes with more students, which is perceived as a direct threat to quality of instruction and to research. Productivity is also perceived by many higher education leaders as a business term that is too often adapted simplistically in a college setting. Several leaders said the term brings to mind assembly lines rather than improved learning environments to better meet student needs. Some higher education leaders described the term as referring generally to approaches to make higher education more responsive to state fiscal constraints. Others linked productivity to particular initiatives, such as performance funding and administrative efficiencies. Given this wide range of viewpoints, the use of the term on campuses remains problematic, though many of the underlying concepts associated with it—such as improving student pathways, increasing student success, and holding down administrative costs—are well-received.

### **Some Difficulties in Measuring Productivity in Higher Education**

**Complexity.** Measurement challenges are common in higher education, partly due to difficulties associated with complex systems, including issues of validity, accuracy, and reliability in comparing data gathered through different methods in different contexts.

**Productivity.** Efficiency and effectiveness have relatively clear, commonly agreed definitions. Productivity is less well understood, particularly in complex systems such as higher education.

**Quality.** The quality of the academic degree is a key component of productivity, yet the development of metrics for quality is the persistent Bermuda Triangle in measurement efforts.

**Values.** Different higher education stakeholders have different goals and values about higher education, which leads to different views of what makes for effective, efficient, or productive higher education.

#### **THE INITIATIVE WAS NOT ABLE TO GAIN CONSENSUS ON THE MEASUREMENT OF PRODUCTIVITY.**

The initiative's efforts to define and measure productivity in higher education were mixed. In championing productivity, Lumina supported several organizations that sought to identify appropriate metrics, but these efforts did not yield consensus.<sup>25</sup> In the absence of a national agreement on a way to measure productivity, Lumina and its partners described productivity improvement in higher education as requiring:

- Substantial increases in the number of degrees and certificates produced,
- At lower costs per degree awarded,
- Without sacrificing the goals of access and equity,
- While maintaining (and even improving) quality.<sup>26</sup>

This description offered a general goal for states, but did not provide a series of accompanying measures that might help them track progress, determine which costs should be included, or address persistent questions about academic quality arising from the productivity work. By default, many stakeholders in the states gravitated to performance-funding measures as a framework for measuring productivity, in lieu of a set of overall metrics. Future actions that support states in developing performance funding may eventually re-enliven the discussion about developing common measures for productivity in higher education.






# Chapter 4

## A Robust Harvest: Step by Step

The productivity initiative succeeded in supporting state leaders in creating policies and programs designed to increase the yields in higher education. Across the Four Steps, the most substantial growth occurred in performance-funding policies (Step 1) and in the redesign of academic delivery models (Step 3).

### Step 1: Performance Funding



**1. PERFORMANCE FUNDING IS SPREADING.** Among the Four Steps, the most substantial efforts and accomplishments were in promoting, gaining support for, and enacting performance-funding policy.

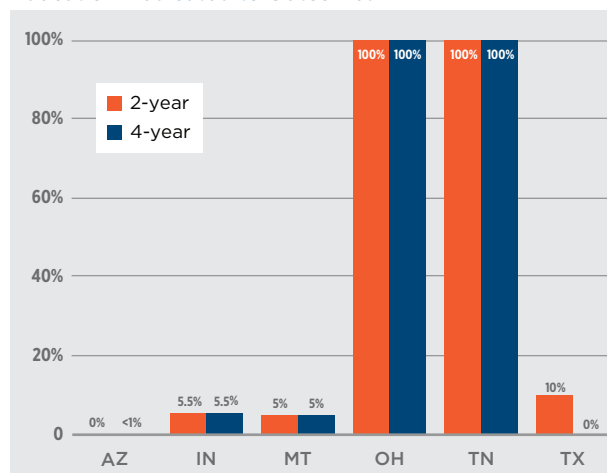
Key stakeholders and champions became publicly engaged in performance funding in all seven states (including those that did not prioritize Step 1 in their grant goals). In **Arizona, Indiana, Montana, Ohio, Tennessee, and Texas**, policy changes to incentivize completions passed the Legislature. In **Maryland**, at the Legislature's request, the coordinating board developed several policy approaches. The changes were more substantial in some states than in others, but performance-funding ideas gained traction in all the states.

**Substantial policy change.** Three states stand out for their historical support for performance funding, the effective ways they included higher education leaders in designing performance-funding models, and their substantial policy changes during the grant period:

- **Indiana** revised its formula several times to better account for differences in institutional mission and to emphasize student persistence and success. The percentage of public higher education operating funds appropriated for performance funding increased but remains modest—rising from about 1.6% to 5.5% during the initiative.

- **Ohio** did not include performance funding as a grant priority, but nonetheless made substantial changes to its formulas in 2009 and again in 2013. The reforms will result in 100% of state operating funding for both two- and four-year public institutions being distributed based on outcomes in 2014-15.
- **Tennessee** passed the Complete College Tennessee Act in 2010, which transformed its previous funding formula to remove enrollment entirely and to emphasize outcome measures for associate, bachelor's and graduate degrees. The state now devotes 100% of its higher education operating allocation to institutions based on student outcomes.

**Figure 5: Percentage of State Funding for Higher Education Dedicated to Outcomes**



*Note: Maryland did not pass performance funding. Texas passed performance funding at 100% for technical colleges. Percentages reflect the share of state funding for higher education operations. Figures are for fiscal year 2014, except: Indiana is for the 2013-2015 biennium; Montana and Ohio are for fiscal year 2015.*

*Source: See SPEC Associates' Cross-State Technical Report and seven state reports.*

**Provisional success.** Three states that did not have a strong history of performance funding saw modest success in passing performance-funding legislation:

- **Arizona's** Legislature required performance funding in public four-year institutions beginning in 2012, but the total amount may be insufficient to change institutional behaviors (less than 1% of total state funding for universities) and it is being discontinued in fiscal year 2015. The chancellor of the state's largest community college is leading a nationwide taskforce to develop a performance-funding model for community colleges and may be able to apply the work to Arizona's community colleges.
- **Montana** acted in 2013 to implement one-time performance formulas for two- and four-year institutions for 2014-15 (at about 5% of the total state appropriation). Longer-term funding metrics are under development for 2015-16 and beyond.
- **Texas** adopted performance funding for community colleges and technical colleges (at 10% and 100% of state funding, respectively), but not for four-year institutions.

**Some movement.**

- **Maryland** did not include performance funding in its grant goals, but the General Assembly directed the state Higher Education Commission to develop performance-funding policy options.

Based on the work of these states, several issues bear watching in relation to performance-funding formulas, including the percentage of state funding of higher education that is dedicated to student outcomes (see Figure 5) and the use of

measures to encourage or address the following: degree completion by under-represented students and in critical fields; persistence in college; transfer; and different missions for two-year and four-year institutions (see Table 2). Generally, the inclusion of these features are consistent with research describing performance funding 2.0, as compared with earlier models referred to as performance funding 1.0.<sup>28</sup>

**2. FULL IMPACTS ARE NOT YET KNOWN.** Performance funding policies that were enacted likely changed the incentive structure for institutions, but the comprehensive effects on institutional and student behaviors are not yet documented.

**Immediate institutional impacts.** Higher education leaders reported changes in institutional behaviors that they linked to performance funding. In several states, institutional leaders said they participated in discussions within their college or university about ways to improve institutional performance based on the state's metrics. The conversations were described as efforts to share information and to improve understanding and planning about ways to increase graduation, student retention, and student success in courses and programs. These changes are consistent with Dougherty and Reddy's descriptions of common "immediate institutional impacts" of performance funding.<sup>29</sup>

**Intermediate institutional changes.** Beyond conversations, many institutional leaders also pointed to changes in policies, programs, or practices in response to performance funding,

**Table 2: Performance-Funding Measures Currently Reported at the State and System Levels**

	AZ	IN		MT		OH		TN		TX
	4 yr	2 yr	4 yr	2 yr	4 yr	2 yr	4 yr	2 yr	4 yr	2 yr
Degree completion of under-represented students		✓	✓			✓	✓	✓	✓	
Degree completion in critical fields, such as STEM	✓	✓	✓							✓
Persistence for various student populations	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Transfer						✓		✓	✓	✓
Differentiated Missions	✓	✓	✓			✓	✓	✓	✓	✓

*Notes: This is a listing of some measures, not all measures across the states. Performance funding was not passed for Maryland, Arizona's two-year institutions, and Texas' four-year institutions. Technical colleges in Texas are not included. Ohio's data reflect 2014-2015. Data for Montana are for its initial metrics, which are focused on retention and completion; the model being developed will likely include other elements.*

*Source: See SPEC Associates' Cross-State Technical Report and seven state reports.*

which are consistent with Dougherty and Reddy's findings of "intermediate institutional changes" linked to performance funding.<sup>30</sup> These reports were primarily from states that had a longer history of performance funding: Indiana, Ohio, and Tennessee. In **Indiana**, the institutional changes include new programs aimed at supporting student success, four-year tuition guarantees, and new student incentives to encourage on-time completion of degrees and certificates. The student incentives differed by institution and system and they include summer tuition discounts to encourage year-round enrollment, no additional tuition for credits earned in excess of 12 per semester, and a cash bonus for on-time graduation. State leaders in **Ohio** reported that the new formulas are moving campuses to identify and remove barriers to student success, including re-examining required courses with high failure rates; increasing advising and wrap-around services; identifying pathways to degrees; and implementing cohort programs for veterans. **Tennessee** reported the development of scholarship "bridge" programs for those losing a state scholarship for one or two semesters, and new policies at the University of Tennessee Knoxville to charge all full-time students for 15 credit hours, regardless of how many they take at 12 hours or above.

**Too early to report changes in student outcomes and longer-term institutional behaviors.** Even with these promising reports from institutional leaders, it is too early to know the comprehensive effects of the new performance-funding policies. Until more quantitative research is available about the effects of performance funding 2.0 on student retention and graduation, early changes appear promising but the relationships are not yet clear between the performance models as deployed by states on the one hand and changes in longer-term institutional behaviors and student outcomes on the other.

### Considerations for States Developing Performance Funding

Creating effective performance measures is a delicate balance. State and higher education leaders reported the following considerations as important in creating performance metrics:<sup>31</sup>

#### **Differentiated institutional missions.**

Performance criteria can affect institutions differently, depending on student populations and other factors; finding the right balance is important. States with histories of performance funding adjusted their formulas over time, based on feedback from colleges and universities.

Two common approaches were: (1) rewarding performance changes based on the institution's own past performance, and (2) including weights for specific student groups, such as traditionally at-risk students.

**Alignment of state priorities and performance criteria.** States have a wide range of priorities for higher education, and it is important that performance criteria address these priorities. States with histories of performance funding adjusted their measures to better reflect state priorities and recent research.

#### **Fluctuations beyond the control of institutions.**

The base year chosen to calculate changes can lead to unexpected drops or increases in funding levels across institutions. As a result, several states use a rolling average of three years to smooth out these impacts. Changes in demographic trends, economic conditions, and other issues can also impact enrollment and degree production.


**Engagement of institutional leaders.** States that were successful in changing state policies engaged college and university leaders in the process of developing performance metrics. They also used listening tours or other ways to provide information to and receive feedback from administrators and faculty.

**Concerns of higher education leaders.** Three primary concerns voiced by system-level and institutional leaders were:

- **Degree quality.** Higher education leaders said that the emphasis on course and degree completion in performance formulas needs to be balanced by an emphasis on ensuring degree quality, so that institutions do not inflate grades or graduate students who are not ready. We found no evidence of this gaming in our data collection.
- **Stability of measures.** Higher education leaders acknowledged the need to adjust performance metrics based on research and institutional feedback over time. However, they also said that eventually the formulas need to be consistent over several years, so that institutions can adapt their behaviors based on predictable formulas.
- **The appropriate share of state funding devoted to performance.** **Indiana** devotes a relatively small share of state higher education spending to performance funding (5.5%), yet higher education leaders there reported observable effects on institutional behavior. At the other end of the continuum, **Ohio** and **Tennessee** have approved of 100% performance-funding levels for state support of higher education operations.

Research has suggested that performance funding, to be effective, needs to be substantial enough to change institutional attitudes and behavior.<sup>32</sup> Across all states, it is important to track the relationship between (a) the share of state funding devoted to performance and (b) institutional changes.

## Step 2: Student Incentives

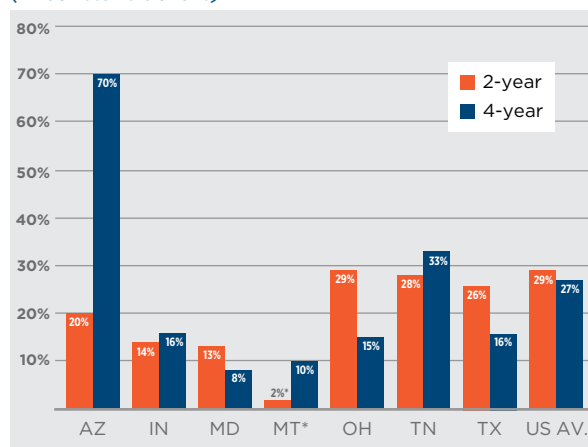


**SOME STUDENT AID AND TUITION POLICIES WERE LINKED TO COMPLETION.** Several states developed modest pricing or financial aid policies that support completion, but larger trends continued to make college less affordable.

Tuition and financial aid policies in the United States are developed primarily in ad hoc ways based on the interaction of a variety of decision-makers and policies at the federal, state, system, and institutional levels—and involving a variety of pressures from governance, politics, and finance structures. In this context, organizational units of state agencies and public higher education systems sometimes act unwittingly to the detriment of state priorities for student access and completion. During the Great Recession, for instance, when unemployment was increasing and state revenues were declining, many states decreased funding of higher education and need-based aid even as tuition increased, effectively shutting more low-income students out of college.<sup>33</sup> Meanwhile, student debt burdens rose substantially for those attending public four-year institutions.<sup>34</sup> These trends are part of a long-term drop in state investment in higher education over the past 30 years.<sup>35</sup> The combination of increases in tuition, declines in state appropriations per student, and the failure of financial aid increases to keep up with tuition, fees and living costs has resulted in a major shift in paying the costs of college over the past three decades—from state residents to students and their families. The combination of these developments has made postsecondary education less affordable for low- and middle-income students.<sup>36</sup>

In all seven states, tuition and fees increased faster than inflation during the grant period, at both two- and four-year public institutions (see Figure 6).<sup>37</sup> The five-year increases at two-year colleges ranged from 2% in **Montana** to

**Figure 6: Five-year Percentage Change in Posted In-State Tuition and Fees, 2008-09 to 2013-14 (in constant dollars)**



\* Montana froze tuition but not fees at two-year institutions.

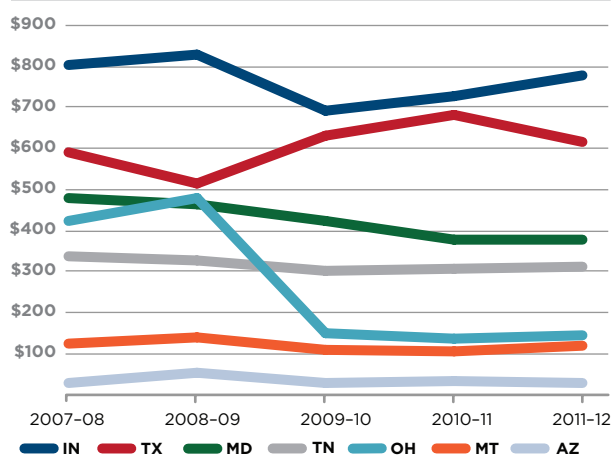
Note: Data are for public colleges and universities, by institutional level. Data represent posted ("sticker") prices, which often are reduced through tuition discounting and sources of financial aid available to a student. Different types of students receive different amounts of tuition discounts and other financial aid depending on the budget that the institutions establish for each student.

Source: College Board, "Trends in Higher Education: In-State Tuition and Fees by State, 2013-14, and Five-Year Percentage Changes."

29% in **Ohio** (in constant dollars). At four-year institutions, the increases ranged from 8% in **Texas** to 70% in **Arizona**. The states' support for need-based financial aid per undergraduate student remained relatively flat or declined during the grant period (see Figure 7). In each state, student debt burdens increased.<sup>38</sup>

Within this landscape, the initiative's approach to higher education pricing and student financial aid was to work at the state, system, or institutional level—depending on the appropriate levers of change—to focus on student financial incentives that might encourage more students to make timely progress toward and complete degrees or certificates. This strategy brought increased awareness in the states and contributed to modest changes that show promise in encouraging more students to graduate more quickly. In examining student financial incentives, the states did not substantially address the interaction between federal, state and institutional aid; the increasing student loan burdens; the fundamental balance between need-based and merit-based aid;<sup>39</sup> or the appropriate mix of tuition, state appropriations, and financial aid in supporting higher education.

**Figure 7: Dollars of Need-based Undergraduate Grant Aid per Undergraduate FTE Student (in current dollars)**



Notes: FTE = full-time-equivalent.

Source: National Association of State Student Grant & Aid Programs (NASSGAP), Annual Survey, 39th through 43rd editions, Table 12, available at <http://www.nassgap.org/viewrepository.aspx?categoryID=3>.

### State and Institutional Financial Aid

Some states and higher education systems experimented with or adopted financial aid strategies to encourage students to stay on track and graduate on time, including:

- Offering higher levels of aid for taking a higher number of credit hours per semester.
- Providing state financial aid to cover summer terms.
- Enacting caps for excessive credits or withdrawing aid from those exceeding time limits for graduation.
- Providing loan forgiveness for on-time graduation.

Research has suggested that simple, transparent financial incentives appear to affect student behavior and linking financial aid to academic performance can bolster the impact of financial aid on college completion for some groups of students. However, additional work is needed to understand the relationship between specific aid programs, student incentives, and student outcomes, particularly for various student populations.<sup>40</sup> In this light, the policies adopted by **Indiana** in 2013 for state need-based financial aid are noteworthy in providing a minimum level of aid based on financial need, with incentives for higher levels of aid for those who meet higher academic standards associated with completion, including:

- Higher levels of aid for those enrolled in at least 30 credit hours per year, with base scholarship amounts for those meeting the minimum 24 hours per year.
- An accelerated-track incentive bonus for students completing 39 credit hours after the first year and 78 credit hours after the second year.
- Extra incentive funds for those who maintain a grade point average of 3.0 or above.
- An option to defer the incentive funds for use in summer school.

In **Tennessee**, guidelines for the HOPE Lottery Scholarship were revised so that the aid can be used to attend summer school. The scholarship was also limited to 120 credit hours to encourage faster completion.

### Tuition Policy

Lumina and HCM Strategists decided to also focus on tuition policy, although none of the states prioritized tuition policy as an area of focus within their Lumina grants. Most states saw some action, primarily at the system or institutional levels, aimed at holding down tuition increases or using tuition incentives to speed completion. These policies included:

- Tuition freezes based on short-term agreements with the Governor or Legislature.
- Flat-tuition or other guarantees, either for all incoming students for a set number of years or for specific groups (such as those who enter as freshmen and who persist each year).
- Tuition caps per term, including policies to charge full-time tuition based on 15 credit hours, regardless of how many hours students take at 12 hours or above.
- Tuition surcharges for excess credits beyond those required to complete a degree or certificate.
- Tuition discounts for high school students who enroll in college courses for dual credit.
- Tuition discounts for starting at a branch campus rather than a main campus.
- Tuition savings for students seeking baccalaureate degrees to start at lower-cost community colleges and then transfer to a four-year institution.



### Step 3: New Models



**REDESIGNS TO IMPROVE STUDENT PATHWAYS AND TRANSITIONS WERE MULTIPLE AND VARIED.** The productivity initiative was successful in enhancing system-wide changes to improve student experiences and transitions—such as pathway improvements, course redesign, program Tuning, and transfer/articulation agreements.

Among the largest challenges in higher education are improving student transitions across institutions and retaining students in the institutions in which they enroll. Promising work to address these longstanding issues included redesigning or reforming existing academic delivery models—and in some cases the development of newer models (such as the introduction of competency-based education). The initiative provided validity, technical support, and expertise to help states, higher education systems, and institutions generate and launch redesign and reform efforts on a more systematic basis.

What was innovative, in most cases, was not brand new initiatives or the latest shiny object. Rather, innovation occurred most often by repurposing existing programs and delivering them in new or expanded ways across new settings, thereby reinforcing the critical nature of context. Along with performance funding, innovative work to redesign or reform educational delivery models generated the most interest and activity across states.<sup>41</sup> The work fell into four overall categories (see Table 3).

Each of the seven states engaged in one or more activities in these areas, including the following major work:<sup>42</sup>

**Arizona.** To facilitate student transfer, Arizona improved articulation between two-year and four-year institutions through statewide course numbering and extensive pathway programs. Northern Arizona University launched a competency-based online degree program.

**Indiana.** New laws require the development of a common course numbering system, a common general education core, and degree pathways to improve transfer. The state capped associate awards at 60 units and bachelor's degrees at 120 units, with authorized exceptions. WGU Indiana, a nonprofit operation of Western Governors University, was established to expand competency-based education in the state, and its students qualify for state aid.

**Maryland** expanded its ground-breaking efforts to redesign large gatekeeper courses. At least 70 courses were redesigned and the Legislature funded further efforts aimed at academic transformation. New laws require institutions to develop statewide transfer agreements, as well as prior learning assessments for veterans.

**Montana** redesigned its higher education system by working to create rebranded two-year institutions with comprehensive community college missions. The new Montana Digital Academy now serves as the online portal for statewide dual enrollment. Undergraduate courses within the Montana University System now have common course numbers and uniform learning outcomes. A new law requires the development of prior learning assessments for veterans.

**Table 3: The States' Work to Redesign and Reform Academic Delivery Models**

<p><b>1. High school-based accelerators</b></p> <p>Dual enrollment, dual credit, and early college high schools.</p>	<p><b>2. Improved remediation and gatekeeper courses</b></p> <p>The redesign of developmental education, the shift of developmental education to high schools or two-year institutions, and course redesign of gatekeeper and other courses to increase student success.</p>	<p><b>3. Improved transfer from two-year to four-year institutions</b></p> <p>Pathway partnerships, articulation and transfer legislation or agreements, Tuning and Fine Tuning, regional campuses and hubs, establishment of a common core of general education courses for transfer, developing common course numbering systems, mission change for two-year institutions, system redesign, and reverse transfer.</p>	<p><b>4. Quicker completion</b></p> <p>All of the previous strategies, plus electronic student advising, predictive analytics, prior learning assessment, competency-based credits, and three-year degree pathways.</p>
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**Ohio** is developing a statewide approach to prior learning assessments. New budget language required the development of three-year degree pathways. A new law requires development of prior learning assessments for veterans and “one-year option” programs to facilitate credit transfer toward technical degrees.

**Tennessee** improved two-year and four-year articulation through cohort programs, course maps, and a 41-credit common core. The use of Degree Compass, an online advising tool that recommends courses and majors based on predictive analytics, is being expanded. Two consortia intended to improve adult success had mixed results. WGU Tennessee was established to expand competency-based education in the state.

**Texas.** Tuning Texas, a major statewide project to align student learning outcomes of courses and programs, engaged faculty as leaders in developing common learning outcomes in 12 academic disciplines statewide, primarily STEM disciplines. Tuning is a faculty-led process for defining subject-specific learning outcomes and general competencies that students must demonstrate to earn degrees in specific academic disciplines. Students also learn what they can do with their knowledge, skills, attitudes and abilities upon graduation. A new law facilitates reverse transfer and competency-based programs. WGU Texas was established to expand competency-based education in the state.

## Step 4: Business Efficiencies



Over the past decades, successive cycles of state cutbacks in funding for public higher education, along with pressure to hold down tuition increases, caused public colleges and universities to seek efficiencies across their operations. Colleges and universities had some success in finding efficiencies, particularly in business services. The productivity initiative sought to build on and scale these efforts, with some progress in data collection and information sharing across institutions, but limited success otherwise. Public Agenda’s research indicated that efforts by college and university administrators to find business cost savings often made it easier

to engage faculty leaders in discussions about changes in the structures of academic delivery models.

**Arizona.** The state Board of Regents identified goals for energy and cost containment and now requires annual reporting from institutions on these targets.

**Indiana.** The state Commission for Higher Education set targets by institution for reducing cost per degree, and directed institutions to provide data on these criteria. At Indiana University-East, through implementation of responsibility-centered management, academic departments are allowed to retain funds resulting from productivity improvements. These practices were documented through grant activities, but the model has not been adopted elsewhere in the state.

**Maryland.** The University System’s effectiveness and efficiency initiative has been a national model since 2003. The grant supported outreach to share this model, including with community colleges. The Maryland Association of Community Colleges established annual conferences on productivity and efficiency, and has continued these on its own. The state’s independent institutions explored establishing a consortium group health insurance plan.

**Montana.** Montana is working to develop an integrated information system for all state institutions. The Board of Regents is pursuing a Smart Buildings Initiative to identify and implement energy savings, which was not part of the state’s grant priorities.

**Ohio.** Grant funds supported expansion of an e-procurement consortium to include several new institutions, and continued progress on a shared services demonstration project. A new state law requires institutional leaders to benchmark progress on efficiency measures and report annually to the chancellor.

**Tennessee.** Community colleges were brought into one system under the Board of Regents, which has the potential to bring statewide efficiencies. This was not part of the state’s grant priorities.

**Texas.** A statewide Council for Continuous Improvement and Innovation was created with one of its charges being to recommend ways to increase efficiency and effectiveness in higher education. Beyond reporting, identifiable actions have not yet been taken. The state’s grant was not focused on this area.



The challenge of finding larger efficiencies is two-fold. First, institutional leaders reported that many colleges and universities, to the extent that they have worked on administrative efficiencies at all, have already picked the low-hanging fruit, such as instituting energy savings measures and joint purchasing. Achieving more substantial efficiencies, such as reducing the number of

administrative staff not providing direct student services, will be more difficult. Secondly, the most promise for cost savings and trimming program budgets may come from developing academic efficiencies. These savings are best found in the creation of new (or reform of existing) academic delivery models (see Step 3).

### Takeaways from the Productivity Work in Each of the Steps

WHAT'S PROMISING?	WHAT'S CHALLENGING?
<b>Step 1: Performance Funding</b>	
Spreading. Performance funding is a natural fit for state policymakers and appears to be gaining support of higher education leaders when they are engaged effectively in design.	Long-range impacts unclear. Intermediate institutional impacts are promising, but the impacts on degree completion are not yet known.
<b>Step 2: Student Incentives</b>	
Innovation. States and institutions are experimenting with a variety of financial aid incentives and tuition discounts or guarantees to encourage more students to graduate more quickly.	Success costs more. The more success that states have in getting low-income, first-generation students to enroll and persist in college, the higher the need will be for financial aid and possibly for additional support services for at-risk students.  Working adults. Working adults require different support from traditional-aged students to enroll and complete degrees.
<b>Step 3: New Models</b>	
Focus on students. The development of better student pathways and transitions focuses institutions on the needs and experiences of students.  Potential of academic models. The development of new academic models has the most potential for reducing cost per degree.	Sustainability. Efforts such as course redesign and program Tuning require extensive faculty engagement. These efforts are costly and difficult to bring to scale statewide.  Reality of academic models. The new academic models have not yet brought substantial cost savings.
<b>Step 4: Business Efficiencies</b>	
Mindset is already there. Colleges and universities are actively seeking business-office efficiencies.	What's left? It is unlikely that administrative efficiencies can be squeezed further.

# Chapter 5

## Implications for Increasing Educational Attainment

States worked collaboratively with Lumina and its national partners over the past six years to develop and advance policies and programs to increase the yields in higher education. This chapter examines implications of the productivity work for states and systems of higher education, and for Goal 2025. As states continue their efforts to increase college attainment and develop a highly educated workforce, their experience in working to increase productivity can help them reach their goals.

### Supporting Statewide Implementation

Each of the seven states—**Arizona, Indiana, Maryland, Montana, Ohio, Tennessee, and Texas**—developed a set of policies and programs aligned with its own priorities for educational attainment and designed to increase degree and certificate production while holding down costs. For these states, the next years are critical. Sustained effort is required to bring pockets of innovation to scale statewide and to maintain traction where statewide implementation is already underway. In no small way, the responsibility rests with the states to articulate the outcomes of their Lumina grants by identifying the interventions that appear to be working best—especially those initiatives that improve student outcomes and yields of more graduates at public colleges and universities.

The redesigned student pathways and academic delivery models are promising but are not yet operating at scale. Models that depend on faculty engagement, such as course redesign in **Maryland** and program Tuning in **Texas**, require ongoing investments to broaden and deepen their impacts. Other examples of promising reform include **Arizona's** lower-cost pathway programs (such as those in which students spend up to three years in community college before completing their baccalaureate at a university at half the price of a degree taken entirely at a four-year public university) and **Montana's** work to expand the missions of its two-year institutions. These efforts are only recently underway. Evidence from this evaluation suggests that supporting and engaging staff and faculty who can serve as connectors and catalysts within institutions may be critical, as well as strengthening institutional and statewide connections with business and

The responsibility rests with the states to articulate the outcomes of their Lumina grants by identifying the interventions that appear to be working best—especially those initiatives that improve student outcomes and yields of more graduates at public colleges and universities.

community stakeholders. States, higher education systems, and institutions will benefit from tracking and evaluating their interventions, to identify changes in institutional behaviors in the short term and changes in student success and degree completion over the long term.<sup>43</sup>

With performance funding underway across most of the implementation states, it also will be important to develop data that makes a clearer connection between financial incentives provided to institutions and improved completion rates. Higher education leaders in **Indiana, Ohio, and Tennessee** report several immediate and intermediate changes in institutional behaviors as a result of state policy changes. It will benefit states to document which of these behaviors persist and deepen over time. Authentic dialogue and the sharing of data and information that verify changes can build goodwill among stakeholders, contribute to implementation, and expand support for performance outcomes in higher education.

Likewise, colleges and universities are in the early stages of developing tuition and financial aid incentives to support faster completion for students. Systems of higher education and individual institutions stand to gain from testing, analyzing, and discussing the impacts of new student financial aid incentives, particularly for specific aid programs and student populations.

The keystone for developing new and enhanced policy is the commensurate need to develop evidence of policy effectiveness. The interaction of students with institutions and systems of higher education is complex and often defies simple description. Determining the influences of state policy changes—in performance funding, financial aid incentives, and redesigned learning opportunities—upon completion rates for different student populations will be fertile ground in refining existing or developing new policies.

Lumina's ongoing support of the Strategy Labs Network—now available to all 50 states—shows promise in helping states increase their yields in higher education. Large portions of Lumina's present-day Strategy Labs, which address a broad state agenda for increasing educational attainment, can be traced to the productivity work. Of the 20 policies that the Strategy Labs now identify as important for states to reach Goal 2025, more than half were developed or shared during the productivity initiative.<sup>44</sup> For state policymakers and higher education leaders, there are benefits to participating in the Strategy Labs Network, such as access to ongoing technical assistance and information sharing. As the Strategy Labs reach more states, it will be important to expand their capacity (1) to identify leaders in each state who are poised to create new policies and programs and (2) to provide those leaders with flexible, hands-on, intensive supports. Of particular interest will be the extent to which connectors and catalysts emerge in the states, and the extent to which these roles are supported by the Strategy Labs.

Beyond policy development, the role of the Strategy Labs Network is less defined. Supporting public higher education systems in bringing innovative programs to scale statewide—through information sharing, strategic planning, and stakeholder engagement—will be needed. In addition, Lumina and the states participating in the Strategy Labs can play a leadership role in supporting data gathering, program monitoring, and evaluation—to identify and publicize changes in student outcomes.

## Addressing Demographic Challenges

Demographic projections pose challenges and opportunities for states seeking to substantially increase attainment of college degrees and certificates. First, minority births in the United States exceeded those for white non-Hispanics in 2011, for the first time since these figures began to be collected.<sup>45</sup> Second, large gaps in educational attainment persist by race/ethnicity, with blacks and Hispanics underperforming non-Hispanic whites. Lower-performing groups in higher education are also more likely to be from low-income families.<sup>46</sup> In short, the fastest-growing racial/ethnic groups continue to have the lowest rates of postsecondary enrollment and attainment. These trends will directly impact educational attainment rates in the future.

A third demographic factor will also drive the productivity agenda: the younger age-groups in the United States are shrinking in size, which means that as they move through the educational pipeline, public colleges and universities are likely to see a decline in traditional college-age youth.<sup>47</sup> A counterweight may lie in expanding college access and degree completion for working adults. However, state leaders said that their states continue to face challenges in reaching and serving more working adults. Also, as the economy emerges from the Great Recession, as employment rates increase and unemployment rates decrease, it may be increasingly difficult to encourage more adults who do not have degrees to enroll in higher education.

States committed to increasing educational attainment will need to target college programs and services for low-income and working-age populations. At the same time, the more successful that colleges and universities are in serving these students the greater may be the need for increased state-financial-aid and support programs so that those students can remain enrolled to graduation. Colleges and universities cannot take on these challenges alone. Increasing attainment rates for broad populations of students will require better and more integrated efforts with state K-12 systems, health-related programs and policies, and workforce development programs and agencies outside of higher education.

## Addressing Fiscal Challenges

Another set of key challenges facing state higher education policy involves finding an appropriate balance among (1) direct funding of colleges and universities, (2) tuition and fee policies, and (3) student financial aid programs. The productivity initiative advanced strategies in each of these areas independently but did not fully address what the balance among the strategies might mean for achieving Goal 2025. For example, for states to increase their educational attainment rates substantially, many more low-income students and adults will need to earn college degrees and certificates over the next decade. As reported in Chapter 4, however, college affordability has declined for low- and middle-income families over the past decades, and student debt loads have increased for those attending public four-year institutions. The Great Recession exacerbated these trends. As states have begun to emerge from the recession, some of them, including **Indiana**, have invested more public dollars in both two- and four-year institutions, and in state financial aid. As of May 2014, however, state support of higher education per student remained below pre-2008 levels, after adjusting for inflation. Almost all states are spending less per student than they did before the recession, and some states have continued to decrease their support per student.<sup>48</sup> A quandary that each state wrestles with—in relation to its historical higher education funding patterns and other demands on state resources—involves whether and how much additional public funding to invest in direct subsidies of higher education versus indirect subsidies in the form of financial aid to students. The productivity work offers a new element to this challenge. In determining their funding priorities for higher education, regarding:

- **Direct support of higher education:** How can states support two- and four-year institutions in increasing degree and certificate completion at lower costs per degree awarded while maintaining access and quality?
- **Indirect support through financial aid and tuition policies:** How can states provide strong incentives for both full-time and part-time students to enroll in higher education and complete degrees and certificates in a timely manner?

Misalignment among complex federal, state, and institutional financial aid programs poses additional challenges. These programs are based on different sets of priorities that sometimes compete to the disadvantage of students. National recommendations have been advanced to simplify and improve federal aid administration, including ways to incentivize completion.<sup>49</sup> In light of these efforts, several recommendations emerge regarding financial aid:

- States should take a stronger role in national discussions about financial aid policy, especially given their early experiences about which state financial incentives appear to be increasing completion rates for which types of students.
- States could profit from these discussions by aligning their own financial aid efforts more effectively with federal policy.
- The federal government could play a stronger role in articulating how to align institutional, state and federal completion priorities with financial aid policies.

## Conclusion

The productivity initiative was successful in helping seven states develop policies and programs focused on improving the yields in higher education. Even as state and higher education leaders faced dire budget conditions during the Great Recession, they came together to create state and institutional changes intended to increase student completion. Going forward, state policymakers and higher education leaders will need to work together to develop and refine policies even as their states face substantial demographic and fiscal challenges. A promising approach may lie in sharing stories more broadly, particularly as data on student outcomes emerge from the productivity work. Stronger evidence that links policy changes to student success and degree completion—including estimates of costs and returns on investment—may be beneficial in identifying smart state investments in higher education.

These efforts to improve productivity in higher education need to be aligned with national strategies to build what Lumina has called a Goal 2025 social movement to increase attainment.<sup>50</sup> Before and during the productivity initiative,

States and the nation could benefit from targeted public engagement to reframe who pays for higher education into a discussion of how everyone gains from it, including 21st century children, adults, seniors, and businesses.

a public debate occurred over the perceived benefits of higher education, as states pulled back their investments in public higher education during the Great Recession. States and the nation could now benefit from targeted public engagement:

- To reframe who pays for higher education into a discussion about how everyone gains from higher education, including 21st century children, adults, seniors, and businesses;
- To identify and broadcast the current advantages (civic and economic) of training and education beyond high school, including impacts on specific and broad communities;
- To ensure that higher education choices are available for students of different abilities, income levels, and ethnicities; and
- To link quality in higher education with quality of life—from employability to civic engagement.

These will-building efforts can be spurred by conversations about student outcomes from the productivity work, as data about those outcomes emerge in states.

The states have work to do in developing public higher education systems that support college attainment for 60% of adult residents. The successes of the productivity initiative represent important early steps, but reaching larger yields will require program implementation at a greater scale and policy refinements over time, based on student outcomes. Achieving these results will require colleges and universities to nurture healthy cultures of evidence and innovation focused on student success. More broadly, stronger higher education systems will also need: better alignment with K-12 education, health systems, and workforce development; supportive Governors and state Legislatures; and broad public support for higher education. Improving the yields of higher education benefits everyone—by increasing individual knowledge and skills, advancing workforce preparation, and creating more informed citizenry prepared for the challenges of the 21st century.

## Appendix I

### ACKNOWLEDGMENTS

SPEC Associates (SPEC) is grateful to many individuals and organizations who contributed their insights, guidance, and other resources to the development of this report. Responsibility for the findings and analysis, however, rests entirely with SPEC.

In the seven productivity states, grant team leadership participated in dozens of conference calls, provided information and important documents, reviewed many SPEC reports, provided SPEC with access to information and staff at their organizations, and facilitated access to other higher education leaders in the state. The following individuals were particularly important in providing key information for the evaluation:

#### Arizona:

**Karen Nicodemus**

GettingAHEAD's Grant Team Lead

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HCM Strategists' advisor to the state

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GettingAHEAD's Grant Coordinator

#### Indiana:

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Grant Coordinator

Many legislators, higher education administrators, institutional presidents and provosts, faculty members, business leaders, students, and others also contributed their time and perspectives during interviews and site visits. This report would not have been possible without their participation, and we hope they hear their voices within it.

The national partner organizations that participated in the productivity work were also instrumental. Kristin Conklin, Partner at HCM Strategists, Inc., provided information and insights about how the productivity work rolled out, how the Strategy Labs Network operates, and what both could mean for the future of higher education. She also facilitated access to the state advisors and mentors who were part of the Strategy Labs Network. Among the Strategy Labs team members, Jimmy Clarke and the HCM advisors contributed to SPEC's conference call preparation and reviewed many reports and interview questionnaires. At HCM Strategists, Anne Dudro provided support and connections to people, internal documents, and databases.

At Public Agenda, Alison Kadlec, Senior Vice President and Director of Public Engagement Programs, provided information about engagement of higher education administrators,



faculty, and students. Michelle Currie, former Senior Public Engagement Associate, reviewed SPEC reports and contributed to conference calls. At the Institute for the Study of Knowledge Management in Education, President Lisa Petrides, as well as Cynthia Jimes, Clare Middleton-Denzer, and Luna Malbroux, helped SPEC gain access to information and facilitated our sharing of evaluation findings on CollegeProductivity.org.

Three national higher education experts reviewed a prior draft of this report: Kristin Conklin, Partner at HCM Strategists; Kevin Dougherty, Associate Professor of Higher Education at Teachers College, Columbia University; and Dominique Raymond, former Vice President, Alliance State Relations at Complete College America.

Over the past six years, SPEC gathered and relied on an international team of evaluation and higher education experts to contribute to this and other reports on Lumina's productivity work: Bob Williams, Rick Voorhees, John Wittstruck, John Muffo, Ruth Mohr, Stephen Maack, Wendy Limbert, and Anne Clark. Melanie Hwalek directed the evaluation. Team members served primary roles in visiting the states, interviewing state leaders, gathering and analyzing data, drafting reports and memos, and developing findings. Thad Nodine facilitated our writing and analysis, and helped to clarify and draw out our key findings. Helen Lowe oversaw the design of the report, with Allison Kline. At SPEC, Victoria Straub provided quality control on evaluation procedures and reports. Natalie De Sole managed telephone interview and on-site data collection, and assured consistency in report formatting.

Finally, SPEC is grateful to Lumina Foundation, for its leadership and support of evaluation as a crucial component of the productivity initiative. Lumina's executive team—Jamie Merisotis, Holiday Hart McKiernan, James Applegate, Dewayne Matthews, Kiko Suarez, Sam Cargile, and Dave Maas—provided direction and expertise as to the purposes of the foundation's work. Strategy Director Kevin Corcoran and former Program Director Suzanne Walsh shared knowledge and information about Lumina's productivity objectives, offered guidance, and ensured that our interviews, analysis, and reports addressed the needs of the foundation. Mary Grcich Williams, former Director of Evaluation, and Courtney Brown, Director of Organizational Performance and Evaluation, provided crucial feedback and facilitated our evaluative efforts throughout the initiative, as did other members of Lumina's team assigned to this work, including Jill Wohlford,

former Director of Organizational Learning; Lucia Anderson Weathers, Communications Director; Susan Johnson, Director of Equity and Inclusion; Strategy Officer Christine Marson; and former Strategy Officer Marcus Kolb.

It is our hope that the evaluative feedback and memos throughout this initiative have helped inform the development of higher education policy and programs in the participating states, and that the findings in this report might prove useful to others seeking to increase tomorrow's yield of postsecondary degrees and certificates.



## Appendix II

### ABOUT THIS EVALUATION

In 2008, Lumina asked SPEC Associates (SPEC) to evaluate the foundation's grant making aimed at improving the productivity of higher education through statewide policy and program change. The initiative was initially known as Making Opportunity Affordable and later became known more broadly as Lumina's higher education productivity initiative. Eleven states received planning grants in 2008 and a year later seven of these states received multi-year grants to implement their productivity plans. In 2009, Lumina published *Four Steps to Finishing First in Higher Education* to frame the content of its productivity work. In 2010, the foundation, working with HCM Strategists, launched the Strategy Labs Network to deliver just-in-time technical assistance, engagement, information-sharing and convenings to states. Lumina engaged SPEC to evaluate these productivity investments in the seven states through exploring this over-arching question:

***What public will building, advocacy, public policy changes, and system or statewide practices are likely to impact higher education productivity for whom and in what circumstances, and which of these are likely to be sustainable, transferable, and/or scalable?***

SPEC's evaluative efforts focused on the effectiveness of Lumina's investments across the states, rather than the effectiveness of each state's efforts in accomplishing its grant goals. The information collected for the evaluation, however, came from a thorough, multi-year examination of the statewide policy and program efforts in each of the seven states. Each state's grant included funding to hire a separate evaluator to evaluate its own work. The state evaluators reported to the state team, not to SPEC or Lumina.

In reporting on accomplishments in the states, SPEC recognizes that Lumina's investments were one of many factors that contributed to the states' work, and that Lumina made investments outside the initiative that may have contributed to each state's accomplishments. SPEC also recognizes that other foundations, initiatives, and organizations worked with the states on similar goals during this period. In the complex environment of state higher education policy, the states' achievements were not solely the result of their participation in the productivity initiative.

### Evaluation Design and Focus on Use

The basis for the national evaluation design was Lumina's directive that the evaluation should be, first and foremost, about learning. The particular focus of this evaluation and its products changed over time, in a developmental fashion, in line with the emerging design of Lumina's productivity initiative. The evaluation team worked with national organizations and experts who were Lumina's productivity partners, with advisors assigned to each state grant team, and with Lumina itself in thinking through the logic of Lumina's initiative and the intended outcomes. In addition, SPEC worked with each state grant team to design one-page schematic roadmaps describing their Lumina-funded interventions.

Early on, SPEC produced a series of evaluation memos about issues that were relevant as the productivity initiative was forming.<sup>51</sup> As Lumina settled on the Strategy Labs as the predominant approach and the Four Steps as the content framework, the evaluation changed its focus toward more systematic tracking of grant activities, outcomes and context in each state. SPEC produced individual state reports in 2011, 2013, and 2014; and cross-state reports in 2012 and 2014. SPEC also produced additional evaluation memos later in the initiative, which focused on special analyses from data collected from and about the work itself. Some of these memos and reports are proprietary; others are public. Public reports from SPEC's evaluation work can be found at [www.specassociates.org](http://www.specassociates.org).

SPEC made extensive efforts to engage the national productivity partners and state team members in learning from this evaluation by holding a series of state-specific conference calls. In addition to SPEC's evaluation team, national productivity partners and state grant team members were invited to submit questions for these calls and to participate in these discussions. SPEC's questions were derived from documents that were gathered during preceding months, including publicly available meeting minutes and legislation, confidential reports of grant-related activities, media articles and national reports relevant to the states. Audio files and transcripts from these conference calls were made available to call participants. In addition to the above-mentioned thematic memos, in the last two years of the evaluation, SPEC produced monthly memos for Lumina and the initiative's managing partner, HCM Strategists, summarizing state conference call content and other information learned about each state and across the seven states during the preceding month.

SPEC further engaged national partners and state team members in learning activities through two national productivity evaluation meetings. These meetings, which took place in 2010 and 2011, facilitated learning about how the national evaluation was framed, about evaluation use more generally and within each state, and about SPEC's findings to date.

To ensure accuracy and encourage representation of multiple viewpoints, SPEC shared drafts of all individual state reports, as well as the interim and final cross-state reports, with state grant team leaders, their advisors, and the national productivity partners.

### Data Sources

In order to understand each state's efforts thoroughly for cross-state synthesis and comparisons, SPEC gathered data from a wide range of sources, beginning with Lumina's work with the states in 2008 and continuing through December 2013. Both qualitative and quantitative data were used in this evaluation. Qualitative data were collected to provide an understanding of how Lumina's strategies contributed to each state's accomplishments. Quantitative data were used largely to provide context for evaluation findings.

Qualitative data were collected from the following sources, and included over 3,500 documents:

- State and national reports and legislation, including annual State of the State addresses by Governors
- Focused observations at national and state meetings
- Transcripts from monthly conference calls with state teams over a three-year period
- Three rounds of in-depth telephone interviews with higher education leaders, business representatives, faculty, students, and state legislative policymakers
- Three site visits to each state for in-person interviews with stakeholders
- Focused interviews with national organizations and individuals connected to Lumina's investments in productivity
- Both print and broadcast media reports

Quantitative data were collected from the following sources:

- Reports and secondary data:
  - Higher education boards
  - Legislative research organizations
  - U.S. Census Bureau
  - State demographers
  - K-12 agencies
  - Statewide nonprofit organizations
  - State and national higher education and education policy organizations
- Databases:
  - National Information Center for Higher Education Policymaking and Analysis
  - National Association of State Student Grant and Aid Programs
  - Integrated Postsecondary Education Data System (IPEDS)
  - Comparative state financial data (Grapevine Compilation of State Fiscal Support for Higher Education Results) analyzed and published by the State Higher Education Executive Officers Association

### Methodology, Data Analyses and Interpretation

Data were analyzed using the multiple methods summarized below. Because this evaluation touched on many complex issues in higher education policy and program change, SPEC assembled an evaluation team consisting of nine seasoned professionals with expertise in program evaluation, higher education systems and governance, state higher education policy, anthropology, systems thinking, evaluation of inter-organization collaboratives and networks, strategic planning, institutional research, and assessment of student learning outcomes. Each of the seven states was assigned two members of the SPEC evaluation team, at least one of whom had specific expertise in higher education. Each team was responsible for identifying relevant documentation, generating questions and participating in state-specific conference calls with state teams, interviewing a purposeful sample of higher education leaders, analyzing state-specific data, and drafting state-specific reports.

To address the over-arching evaluation question (listed above), SPEC used the following qualitative analytic techniques:

- Examination of each state’s goals and achievements in relationship to their policy contexts, including higher education governance, leadership, finance, and accountability
- Monthly synthesis of newly acquired information and insights
- Coding and tagging of concepts and themes in documents, transcripts, and data reports
- Analysis of patterns and trends across states on factors external to higher education
- Sense-making via:
  - Focused discussions with state grant team members
  - Site visit discussions with key higher education leaders
  - Feedback on reports from state team members and from Lumina’s national productivity partners
  - Reflection with Lumina staff and national productivity partners
  - Ongoing interpretive discussions among evaluation team members

### Challenges in this Evaluation

The major challenges associated with this evaluation were:

- The productivity initiative was collaborative, emergent, long-term and adaptive as learning occurred and as different needs emerged over time. As a result, the initiative’s overall purposes, objectives, and strategies shifted during the evaluation period. For these and other reasons, the initiative did not adopt a consistent theory of change or articulate critical assumptions undergirding its Four Steps agenda and Strategy Labs approach. With continually emerging and moving targets, SPEC was not able to establish a stable set of criteria upon which to build a summative evaluation design. As a result, the evaluation design was formative and was refined over time as the initiative itself changed.

- The initiative invested significant resources in research and expert opinions related to defining and measuring higher education productivity, but consensus was not reached as to how higher education productivity should be measured.<sup>52</sup> Without agreed-upon measures for productivity, SPEC could not establish baseline levels in the seven states and could not track changes in productivity over time, as might be expected from a more summative evaluation model.
- Because policy and program changes in higher education take years to emerge and because they are sensitive to complex factors beyond the bounds of this evaluation, SPEC was limited in its ability to assess the impacts of the changes beyond (1) alignment of achievements with the pertinent research in the field and (2) the perceptions of stakeholders as to immediate and intermediate impacts. In particular, the evaluation was limited in assessing impacts on student behaviors.

### This Evaluation’s Value Add

Given the challenges identified above, SPEC’s interactive and formative evaluation approach may have been its greatest strength. Informally throughout the grant period, both national productivity partners and state team members told SPEC that having a national evaluator studying their efforts and providing them with feedback enriched their work. They said that having timely exchanges of information (such as through the state-specific conference calls) helped them consider their purposes more deliberately, provided reminders to reflect on their efforts regularly, and offered them opportunities to share lessons from their work with stakeholders within and outside of their state. They also said that meetings and conference calls associated with SPEC’s national evaluation processes provided insights from the policy and program changes related to their state’s grant initiative. SPEC also heard from national productivity partners, including Lumina Foundation staff, that the evaluation memos—particularly those at the developmental stages of the work—were helpful in: clarifying issues and options; solidifying resolve to reorganize and restructure the work; supporting thoughtful conversation about priorities and management issues; and contributing to a shared understanding of key learnings from the initiative.

## Endnotes

- <sup>1</sup> This document uses “higher education,” “postsecondary education,” and “college” interchangeably to refer broadly to all opportunities for education or training beyond high school.
- <sup>2</sup> These figures do not include one- and two-year certificates. Lumina Foundation, *A Stronger Nation Through Higher Education: Closing the Gaps in College Attainment* (Indianapolis, IN: 2014), <http://strongernation.luminafoundation.org/report/>.
- <sup>3</sup> Lumina meanwhile supported research to measure and define productivity for postsecondary systems and institutions. In 2006, Lumina incorporated the concepts into the initiative’s goal to achieve “greater success, and improved quality, at a cost that students and the public can afford.” In 2010, the concepts were portrayed through an overall goal “to increase the number and proportion of adults who hold a postsecondary certificate or degree, at a lower cost per degree awarded, while preserving or increasing academic quality.” See Lumina, “Lumina Foundation allocates \$25.5 million to initiative to make higher education more affordable and accessible,” press release dated June 21, 2006, retrieved Feb. 27, 2014, at [http://www.luminafoundation.org/newsroom/news\\_releases/2006-06-21.html](http://www.luminafoundation.org/newsroom/news_releases/2006-06-21.html); and Lumina, *Navigating the New Normal* (Indianapolis, IN: 2010), retrieved Aug. 16, 2012, at [http://www.luminafoundation.org/publications/Navigating\\_the\\_new\\_normal.pdf](http://www.luminafoundation.org/publications/Navigating_the_new_normal.pdf), p. 6.
- <sup>4</sup> President Barak Obama, “Remarks of President Barak Obama, as prepared for delivery,” address to Joint Session of Congress, Tuesday, Feb. 24, 2009, retrieved Apr. 4, 2014, at [http://www.whitehouse.gov/the\\_press\\_office/Remarks-of-President-Barack-Obama-Address-to-Joint-Session-of-Congress](http://www.whitehouse.gov/the_press_office/Remarks-of-President-Barack-Obama-Address-to-Joint-Session-of-Congress).
- <sup>5</sup> National Governors Association and National Association of State Budget Officers, *The Fiscal Survey of the States* (Washington, D.C.: Fall 2011), pp. vii.
- <sup>6</sup> Lumina Foundation, *College Productivity: Four Steps to Finishing First, An Agenda for Increasing College Productivity to Create a Better-Educated Society* (Indianapolis, IN: not dated), pp. 4-5.
- <sup>7</sup> Lumina Foundation, “11 states receive grants to bolster productivity in higher education,” press release dated Dec. 17, 2008, retrieved Jan. 21, 2013, at [http://www.luminafoundation.org/newsroom/news\\_releases/2008-12-17.html](http://www.luminafoundation.org/newsroom/news_releases/2008-12-17.html).
- <sup>8</sup> Early in the initiative, Jobs for the Future (Boston, MA) served as managing partner; CommunicationWorks, LLC (Washington, D.C.) managed public communications; and the Institute for the Study of Knowledge Management in Education (Half Moon Bay, CA) supported knowledge sharing among state teams through the creation and use of an online platform. In 2008, HCM Strategists (Washington, D.C.) began managing specific aspects of the initiative, including selecting and managing the state advisors and, eventually, managing the Strategy Labs Network.
- <sup>9</sup> It is important to note that these processes developed over time and there were exceptions to how they worked in practice. In addition, consultation and communications by policy leads and state teams varied by state. Sometimes, state leaders who were not on the state teams contacted Lumina or HCM Strategists directly to ask for assistance. Over time Strategy Labs became less Step-centric and more of a platform to engage policymakers on a variety of Four-Steps related issues.
- <sup>10</sup> Using Stephanie Neilson’s characterization of seven primary forms of policy processes, the initiative’s use of multiple approaches was consistent with the view that policy development is more political (contested and contextual) than rational (linear or incremental). Primarily, the initiative sought to influence policy through what Neilson describes as an agenda-setting model in which three elements converged: (1) the highlighting of state needs or problems to be solved (in this case, a lack of educational attainment and increasing costs of higher education); (2) the use of champions to highlight solutions (that is, greater productivity through the Four Steps); and (3) the political will to act (accentuated, perhaps, by the timing of the Great Recession). See Stephanie Neilson, “IDRC-supported research and its influence on public policy: Knowledge utilization and public policy processes: A literature review,” International Development Research Centre, Ottawa, Canada, 2001, retrieved Mar. 10, 2014, at <http://idl-bnc.idrc.ca/dspace/bitstream/10625/31356/1/117145.pdf>.
- <sup>11</sup> For example, Montana leaders said that their track record of progress under the productivity grant was a key factor in the state’s receipt of \$25 million from the U.S. Department of Labor, through the Trade Adjustment Assistance Community College and Career Training (TAACCT) program. Maryland leaders attributed to Lumina’s grant the expansion of course redesign, which eventually led to receipt of other grants, including from the Bill & Melinda Gates Foundation.
- <sup>12</sup> Higher education leaders in Arizona reported that visits by Lumina’s president were helpful in prioritizing higher education productivity in budget discussions between the Board of Regents and the Governor. In Tennessee, Lumina’s president met with the Governor’s staff to discuss the state’s higher education agenda.
- <sup>13</sup> The Delta Cost Project was created by Lumina to address the gap in data on college and university spending. It has since been absorbed into the American Institutes for Research (AIR).
- <sup>14</sup> The national meeting agendas included time for states to meet on their own. This was described by state leaders as unique and useful.
- <sup>15</sup> After the state leadership change, Lumina allowed Ohio to modify its grant work to focus more on new models of academic delivery (prior learning assessment). The Strategy Labs supported champion development in that area, in performance funding, and in support of increased attainment generally.
- <sup>16</sup> Patricia Rogers and Bob Williams, *Sustainability of Services for Young Children and Their Families: What Works?* (Australian Research Alliance for Children & Youth, 2008).
- <sup>17</sup> For information about the on-going Strategy Labs, see <http://strategylabs.luminafoundation.org/>.
- <sup>18</sup> Using Stephanie Neilson’s depiction of policy process models, these engagement practices are consistent with an agenda-setting model of policy change, in which high-level champions are poised to bring policy solutions to existing policy problems within a favorable political context. Under this model, implementation is usually considered a separate issue, not part of the policy context. In contrast, an “incremental” model of policy development assumes that the ways administrators or faculty interpret policy can be as important as the policy itself, and build in (1) engagement of implementers up front and (2) support for implementation later. Neilson, “IDRC-supported research,” 2001, op cit.



- <sup>19</sup> National Bureau of Economic Research, "Business Cycle Dating Committee, National Bureau of Economic Research" (2010), retrieved Feb. 27, 2014, at [www.nber.org/cycles/sept2010.html](http://www.nber.org/cycles/sept2010.html).
- <sup>20</sup> Lumina Foundation, "11 States Receive Grants to Bolster Productivity In Higher Education," press release dated December 17, 2008, retrieved Jan. 21, 2013, at [http://www.luminafoundation.org/newsroom/news\\_releases/2008-12-17.html](http://www.luminafoundation.org/newsroom/news_releases/2008-12-17.html).
- <sup>21</sup> Lumina Foundation, "11 States Receive Grants," Dec. 17, 2008, op cit.
- <sup>22</sup> For examples of Lumina's approaches directed to state leaders in this fiscal climate, see Lumina, *Navigating the New Normal*, Lumina National Productivity Conference, Indianapolis, 2010.
- <sup>23</sup> Montana emphasizes individualism and self-sufficiency but higher education leaders there are considering ways to frame need-based aid in terms of increasing access and completion.
- <sup>24</sup> See for example, Lipman Hearne, "Bellwether Study of Productivity," research conducted for Lumina Foundation, 2011 (copy in possession of SPEC Associates); and Public Agenda, *Campus Commons? What Faculty Financial Aid Officers and Others Think about Controlling College Costs*, a report for Making Opportunity Affordable (New York: 2009).
- <sup>25</sup> See for example: National Center for Higher Education Management Systems, *Measures that Inform and Drive Change and Improvement in College Completion* (Boulder, CO: 2009); Delta Cost Project, *Trends in College Spending 1999-2009* (Washington, D.C.: 2011), retrieved Sept. 19, 2012, at [http://www.deltacostproject.org/analyses/delta\\_reports.asp](http://www.deltacostproject.org/analyses/delta_reports.asp); National Governors Association, *Complete to Compete: Common College Completion Metrics* (Washington, D.C.: 2010), retrieved Sept. 19, 2012, at <http://www.nga.org/files/live/sites/NGA/files/pdf/1007COMMONCOLLEGEMETRICS.PDF>; and National Research Council of the National Academies, Panel on Measuring Higher Education Productivity, *Improving Measurement of Productivity in Higher Education*, edited by T. A. Sullivan, C. Mackie, W. F. Massy, and E. Sinha (Washington, D.C.: National Academies Press, 2012).
- <sup>26</sup> Lumina Foundation, *Navigating the New Normal* (Indianapolis, IN: 2010), retrieved Aug. 16, 2012, at [http://www.luminafoundation.org/publications/Navigating\\_the\\_new\\_normal.pdf](http://www.luminafoundation.org/publications/Navigating_the_new_normal.pdf), p. 6.
- <sup>27</sup> Lumina was working on these issues in other areas of the foundation. For example, K-12 to college alignment was part of an entire strategy Lumina had that was dedicated to ensuring students are prepared academically, psychologically, and socially to succeed in college.
- <sup>28</sup> See Dennis Jones, "Outcomes-Based Funding: The Wave of Implementation," draft for Complete College America (Denver: National Center for Higher Education Management Systems, 2013), retrieved on Mar. 25, 2014, at <http://www.nchems.org/pubs/detail.php?id=155>; K. J. Dougherty and V. Reddy "The Impacts of State Performance Funding Systems on Higher Education Institutions: Research Literature Review and Policy Recommendations," *Community College Research Center Working Paper 37*, (New York: Teachers College, Columbia College, Community College Research Center, December 2011), retrieved Jan. 15, 2014, at <http://ccrc.tc.columbia.edu/publications/impacts-state-performance-funding.html>; and Dennis Jones and Martha Snyder, "Performance Funding and Strategic Finance for Higher Education," presentation, NGA Center for Best Practices, Postsecondary Policy Academy, May 12, 2012, Denver, CO, <http://www.nga.org/files/live/sites/NGA/files/pdf/1204POSTSECONDARYJONES.PDF>.
- <sup>29</sup> K. J. Dougherty and V. Reddy, "Performance Funding for Higher Education: What Are the Mechanisms? What Are the Impacts?" *ASHE Higher Education Report 39*, No. 2, Kelly Ward and Lisa Wolf-Wendel, series editors (San Francisco: Jossey Bass, 2013).
- <sup>30</sup> Dougherty and Reddy, "Performance Funding for Higher Education," op cit.
- <sup>31</sup> For other suggestions for states considering performance funding options, see K. J. Dougherty et al., "Envisioning Performance Funding Impacts: The Espoused Theories of Action for State Higher Education Performance Funding in Three States," Community College Research Center Working Paper No. 63 (New York: Teachers College, Columbia College, Community College Research Center, August, 2013).
- <sup>32</sup> Dougherty and Reddy, "Performance Funding for Higher Education," op cit., p. 63.
- <sup>33</sup> NGA and NASBO, *The Fiscal Survey of the States* (Fall 2011), op cit. Eric Bettinger and Betsy Williams, "Federal and State Financial Aid During the Great Recession," preliminary draft, National Bureau of Economic Research, Dec. 19, 2013, retrieved Mar. 24, 2014 at <http://www.nber.org/chapters/c12861>.
- <sup>34</sup> Ben Miller, *The Student Debt Review* (Washington, D.C.: New America Foundation, 2014).
- <sup>35</sup> Pell Institute for the Study of Opportunity in Higher Education, "State Investment and Disinvestment in Higher Education, FY1961 to FY2014," *Postsecondary Education Opportunity* 260 (Feb. 2014): available at [www.postsecondary.org](http://www.postsecondary.org).
- <sup>36</sup> Pell Institute for the Study of Opportunity in Higher Education, "State Need-based Grant Aid 1979 to 2012," *Postsecondary Education Opportunity* 254 (Aug. 2013): pp. 4-8, available at [www.postsecondary.org](http://www.postsecondary.org).
- <sup>37</sup> Data include fees as well as tuition, which may explain Montana's increase, despite its tuition freeze, at two-year institutions. College Board, "Trends in Higher Education: In-State Tuition and Fees by State, 2013-14, and Five-Year Percentage Changes," retrieved Mar. 25, 2014 at <https://trends.collegeboard.org/college-pricing/figures-tables/in-state-tuition-fees-state-2013-14-and-5-year-percentage-changes>.
- <sup>38</sup> Student debt data are for 2009-10 to 2011-12 at public institutions, and are available from the Institute for College Access and Success at <http://college-insight.org/#explore/go&h=76b6f24499bf3a9dc431816a294d525d>, visited May 21, 2014.
- <sup>39</sup> Higher education leaders in Montana requested increases in need-based aid but the requests were turned down by the Legislature. Higher education leaders in Arizona acknowledged that there was not much they could do about increasing student aid of any kind at the state level.
- <sup>40</sup> Susan Dynarski and Judith Scott-Clayton, *Financial Aid Policy: Lessons from Research*, NBER Working Paper Series (Cambridge, MA: National Bureau of Economic Research, January 2013), pp. 19-28; Judith Scott-Clayton, "On Money and Motivation: A Quasi-Experimental Analysis of Financial Incentives for College Achievement," *Journal of Human Resources* 46, no. 3 (2011), pp. 614-46; and Reshma Patel and Lashawn Richburg-Hayes, *Performance-Based Scholarships: Emerging Findings from a National Demonstration* (New York: MDRC, 2012).
- <sup>41</sup> Outcomes here is defined as the development of policies, programs, and practices. It is too soon to identify student outcomes for this work.

- <sup>42</sup> Not all of this work was supported directly by the productivity grants.
- <sup>43</sup> As an example of effective efforts, Maryland has taken steps to support continued course redesigns, including through funding from the Legislature and the creation of The Center for Academic Innovation.
- <sup>44</sup> See <http://strategylabs.luminafoundation.org/higher-education-state-policy-agenda/>.
- <sup>45</sup> U.S. Census Bureau, "Most Children Younger than Age 1 are Minorities, Census Bureau Reports," news release, Washington, D.C., May 17, 2012, retrieved Apr. 15, 2014, at <http://www.census.gov/newsroom/releases/archives/population/cb12-90.html>.
- <sup>46</sup> ACT, College Board, Western Interstate Commission for Higher Education (WICHE), *Knocking on the College Door: Projections of High School Graduates by Sex and for Major Metropolitan Areas* (Boulder, CO: WICHE, 2013), pp. 3-4.
- <sup>47</sup> Sara Lipka, "Demographic Data Let Colleges Peer into the Future," *Chronicle of Higher Education*, Jan. 19, 2014, retrieved Apr. 4, 2014, at <http://chronicle.com/article/demographic-data-let-colleges/144101/>.
- <sup>48</sup> M. Mitchell, V. Palacios, and M. Leachman, *States are Still Funding Higher Education Below Pre-Recession Levels* (Center on Budget and Policy Priorities: May 1, 2014), retrieved Jan. 15, 2015, from <http://www.cbpp.org/cms/?fa=view&id=4135>.
- <sup>49</sup> For example, see Stephen Burd et al., *Rebalancing Resources and Incentives in Federal Student Aid*, (Washington, D.C.: New America Foundation, 2013). Lumina's federal policy priorities are available at [http://www.luminafoundation.org/newsroom/federal\\_policy\\_priorities/](http://www.luminafoundation.org/newsroom/federal_policy_priorities/).
- <sup>50</sup> Building a social movement is one of Lumina's five major tactics for "Mobilizing to Reach Goal 2025," retrieved May 23, 2014, at [http://www.luminafoundation.org/goal\\_2025.html](http://www.luminafoundation.org/goal_2025.html).
- <sup>51</sup> For the use of evaluation memos in the early stages of evaluation, see M. Hwalek and M. Grcich Williams, "The Real-Time Evaluation Memo: A Tool for Enabling Evaluative Thinking and Learning in Foundations and Nonprofits," *Foundation Review* (2:3), 2011, pp. 25-35.
- <sup>52</sup> For a discussion of the complexities involved in measuring higher education productivity, see National Research Council of the National Academies, Panel on Measuring Higher Education Productivity, *Improving Measurement of Productivity in Higher Education*, op cit.





