Cross-State Technical Report for
Lumina’s State-Based Efforts to Improve Productivity in U.S. Higher Education

A Summary of Work in Seven States

SPEC Associates produced this report with financial support from Lumina Foundation.

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Introduction and Summary

As part of its efforts to spur educational attainment, Lumina launched Making Opportunity Affordable in 2005, which by 2006 had evolved into a multistate grant initiative to increase productivity in higher education. The foundation 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. Lumina supported state leaders in developing policies and programs to enroll and graduate more students while maintaining or lowering the cost per degree. As the initiative evolved, it became organized around "Four Steps to Finishing First in Higher Education," a set of state and system-level policy and program priorities to increase productivity. The Lumina document on the four steps can be found at http://www.luminafoundation.org/files/publications/Four_Steps_to_Finishing_First_in_Higher_Education.pdf. Lumina asked the states to develop strategies in each of these four areas:

1) PERFORMANCE FUNDING Targeted incentives for colleges and universities to graduate more students with 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. ¹

In each of the seven states, Lumina supported a wide range of activities. The foundation awarded implementation grants ranging in amount from $831,000 to $1.8 million² that were administered in each state by teams that included higher education leaders, political leaders, business leaders, and others. Strategy Labs Network became the initiative's vehicle for delivering technical assistance, engagement opportunities, and support to state policymakers and higher education leaders (see sidebars). The states also contributed additional resources, including support from other sources such as national grants awarded by other foundations.

In 2008, Lumina asked SPEC Associates (SPEC) to evaluate this productivity initiative. This technical report provides a summary of the work in the seven states.

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 solutions 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.
states during the grant period (2008-2013) in each of the Four Steps. Data collection for this report ended December, 2013.

A national evaluative report, *Improving the Yields in Higher Education: Findings from Lumina Foundation’s State-Based Efforts to Increase Productivity in U.S. Higher Education*, presents the evaluation team’s major conclusions about the initiative’s potential impacts and implications. The evaluative report also provides a brief history of the initiative and a description of the Strategy Labs Network. Individual state reports examine the productivity-related accomplishments in each state during the grant period. The reports are available at www.specassociates.org.

During the initiative, priorities shifted somewhat for Lumina as well as for the individual states. State grant teams adjusted accordingly as policy environments shifted, leadership positions changed hands, and new opportunities arose. Given the complexity inherent in this work, it is not possible in most cases to assess the extent to which specific interventions led to specific outcomes in each state. Rather, this report identifies key areas of policy and program change within each of the Four Steps among the seven implementation grant states.³ 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 the states’ accomplishments. It is important to note that grant funds from Lumina were not used for lobbying or related activities. Lumina’s grantees used these funds to provide technical assistance based on nonpartisan research and analyses. Grantee intermediaries neither supported nor opposed legislation. They informed and educated policymakers and higher education leaders about emerging and good practices, shared ideas and strategies, supported educational outreach campaigns, promoted the work of champions for using available resources to provide high-quality education to more people, and otherwise catalyzed
policy and program improvement to increase productivity in higher education. (Appendix I provides acknowledgement to those who contributed to this work. For the methodology of this evaluation, see Appendix II.)

**Summary: States were most active in performance funding and new models**

In examining state actions across the Four Steps, the primary areas of activity and outcomes were in performance funding (Step 1) and new models (Step 3) (see Table 1). In performance funding, states focused on state policy change to increase higher education productivity. By the end of 2013, all states saw success in engaging key stakeholders in discussing or promoting performance funding. In six states, performance-funding policy changes either passed the Legislature or were recommended by the higher education governing or coordinating board, although the changes in some states were more substantial than in others.

In the development of new models for instructional delivery (Step 3), states were active in enhancing systemwide and institutional changes to improve student experiences and transitions—such as pathway improvements, course redesign, program Tuning, and transfer/articulation agreements. All seven states engaged in multiple activities in these areas. In most cases, what was innovative was not brand new initiatives. Rather, innovation occurred most often by repurposing existing programs and delivering them in new or expanded ways across new settings. There was less activity in developing student incentives (Step Two) and in creating business efficiencies (Step Four).
### Table 1.
Examples of Primary Higher Education Productivity Achievements in Each State November 2008 through December 2013

<table>
<thead>
<tr>
<th></th>
<th>Step One Performance Funding</th>
<th>Step Two Student Incentives</th>
<th>Step Three New Models</th>
<th>Step Four Business Efficiencies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AZ</strong></td>
<td>• New model in place for universities.</td>
<td>• Legislated pilot program to waive tuition for foster children at public universities.</td>
<td>• Improvements to two-year and four-year articulation.</td>
<td>• Board of Regents identified goals and requires annual reports from institutions.</td>
</tr>
<tr>
<td></td>
<td>• Model under review for community colleges.</td>
<td>• Tuition guarantee programs at Northern Arizona and Arizona State.</td>
<td>• Northern Arizona launched a competency-based online degree program.</td>
<td></td>
</tr>
<tr>
<td><strong>IN</strong></td>
<td>• Previous model revised to reflect institutional missions and weight progress toward a degree and completions more heavily.</td>
<td>• Some important revisions to student aid policy.</td>
<td>• Legislation requires development of degree pathways.</td>
<td>• Documentation of effective practices but little spread</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Financial aid for WGU Indiana.</td>
<td>• WGU Indiana was created.</td>
<td>• Targets set for reducing cost per degree.</td>
</tr>
<tr>
<td><strong>MD</strong></td>
<td>• In discussion.</td>
<td>• Four-year tuition freeze within University System of Maryland; legislation directed focus to near completers and incentives for associate degrees prior to transfer.</td>
<td>• Course redesign; state funding for academic transformation.</td>
<td>• Group health insurance being established for independent institutions.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Legislation requires development of statewide transfer agreements and prior learning assessment guidelines for veterans.</td>
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<tr>
<td><strong>MT</strong></td>
<td>• Pilot model in place; permanent model under development.</td>
<td>• Tuition freezes since 2007 at community colleges, for six of the last eight years at comprehensive master's degree granting institutions and for four of the last eight years at the two flagship universities.</td>
<td>• System redesign (two-year colleges).</td>
<td>• Working toward development of an integrated information system.</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>• Montana Digital Academy platform for dual enrollment.</td>
<td>• Banner platform implemented at two additional public institutions.</td>
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<tr>
<td>State</td>
<td>Step One</td>
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<tr>
<td></td>
<td>Performance Funding</td>
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<tr>
<td>OH</td>
<td>• Previous model revised to weight completions more heavily and new formulas now include 100% of state appropriations in formula allocations.</td>
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<th>Step Two</th>
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<tr>
<td>Student Incentives</td>
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<td>TN</td>
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<td>TX</td>
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<th>Step Three</th>
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<td>New Models</td>
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<td>TN</td>
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<td>TX</td>
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<td>Business Efficiencies</td>
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Chapter 1
Step One: Performance Funding

Targeted Incentives for Colleges and Universities to Graduate More Students with Quality Degrees and Credentials

Across the seven states, the most substantial policy changes among the Four Steps were in performance funding aimed more directly at improving student outcomes and increasing attainment. In all seven states (including those that did not prioritize Step One in their implementation grants), key stakeholders and champions became publicly engaged in the work. 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 recommended possible policy approaches. Table 2 lists the changes in performance funding through December 2013 across the seven states.

The history of performance funding in the U.S. can be separated into two overall periods, based on the funding models used.\(^4\) The models implemented from 1980 to 2010—sometimes referred to as performance funding 1.0—including a range of design flaws, such as the use of additional rather than base funding, a focus on institutional outcomes, priorities that were misaligned with institutional missions, metrics that were overly complex or based on insufficient data, and lack of institutional buy-in. In comparison, the models used since 2010—referred to as performance funding 2.0—are more likely to incorporate existing funding, focus on student outcomes, use improved metrics, and enjoy greater institutional support. Some states allocate additional funding for serving the new traditional students who are from lower-income families, students of color and first-generation college-going students.\(^5\) The history of incentive-based funding in the seven implementation grant states is consistent with this categorization. The formulas were put in place during the grant period incorporating more characteristics of performance funding 2.0, which Lumina and others, including the National Center for Higher Education Management Systems, now describe as outcomes-based funding, to distinguish it from earlier versions of incentive-based funding in place from the late 1970s through 2010.

Among the higher education leaders SPEC spoke with across the seven states, there was widespread support for the idea of outcomes-based funding. At the same time, there were widespread concerns about the realities of implementation, particularly about the impacts of funding formulas. During the grant period, several states responded to these concerns by engaging institutional stakeholders in the process of determining or revising the formulas. A report for the Indiana Commission for Higher Education by HCM Strategists suggests that having institutions involved in creating performance-funding formulas can contribute to institutional buy-in.\(^6\) Part of the difficulty in gaining acceptance among institutional leaders and faculty for performance funding is that documented results from performance funding 1.0 have been mixed, and outcomes-based formulas have not been in place long enough to fully judge their impact.\(^7\)
A wide range of policy changes

Five of the seven states prioritized outcomes-based funding as part of their implementation grant goals or activities: Arizona, Indiana, Montana, Tennessee, and Texas. Among these states, Indiana, Tennessee, and Texas already had some form of performance funding in place. All five states enacted policy changes during the grant period, ranging from minor changes of existing policy to substantial increases in the percentage of funds awarded based on performance.

- Arizona’s Legislature required the Board of Regents to implement performance funding in four-year public institutions by 2012. With no significant history of performance funding, the state prioritized the development of a new finance model for higher education in its implementation grant application. Grant and Strategy Labs activities featured engagement with university leaders as key stakeholders. Several higher education leaders indicated that grant-funded activities helped to consolidate support for performance funding and move it forward. In June 2012, the Board of Regents met its goal of implementing performance funding, though the amount was small: $5 million of total university budgets. In 2013, the Regents proposed a funding request for FY 2015 that included $39 million for performance funding, but the Legislature did not act on the proposal. As of late 2013, there was little indication that legislators were committed to going further with performance funding for universities. However, the state’s community colleges worked independently to develop their own proposals for performance funding.

- Indiana implemented performance funding in 2007. An original goal of the state’s implementation grant was to engage key stakeholders in discussions to improve performance metrics. Grant funds partially supported listening tours by the commissioner, and Strategy Labs Network nonpartisan research briefs and consultations helped inform the discussions. During the grant period, Indiana’s formula evolved to better account for differences in institutional mission and to emphasize student persistence and success. Although the percentage of the higher education operating budget contingent on performance funding remains small, it increased from 1.6% in the 2007-2009 biennium to 5.5% in the 2013-2015 biennium.

- Montana does not have a history of performance funding, although the topic had been discussed for a number of years prior to the state’s involvement with Lumina. State leaders took advantage of grant activities and a Strategy Labs Network site visit to learn more about performance-funding models. In 2013, the Governor, Higher Education Commissioner, and Legislature struck a deal whereby over the next biennium, the University System would freeze tuition and implement performance funding, and the Legislature would provide level funding for the University System’s core operations. The University System also committed to allocating $7.5 million (approximately 5% of the total state appropriation to the University System) to campuses based on progress made toward increasing college completions and other student retention outcomes. The University System established the short-term model that will be implemented in 2014-2015. A Performance Funding Steering Committee composed of institutional leaders and faculty is currently developing a long-term model that is expected to be implemented from 2015-2016 forward.
• Tennessee was a pioneer in performance funding, allocating a relatively small amount of appropriations (about 5%) to institutions since the late 1970s, although the metrics were based on student learning outcomes rather than on degree completion. In 2010, a new law called the Complete College Tennessee Act transformed the existing funding formula, based primarily on enrollment, to the nation’s first outcomes-based funding formula with metrics that included completion of associate, bachelor’s, and graduate degrees. Tennessee now devotes 100% of its higher education operating allocation to institutions based on a range of student outcomes. Higher education leaders in Tennessee indicated that the state’s policy action was enhanced by grant and Strategy Labs activities.

• In 2007, the Texas Legislature appropriated $100 million to the Texas Higher Education Coordinating Board for incentive funding to public general academic teaching institutions to be used in fiscal year 2009. In 2008, Governor Perry established a task force to make recommendations for an incentive program for all public higher education institutions to reward student and institutional outcomes aligned with state and regional priorities that included the use of the funds appropriated in 2007. The coordinating board used the task force’s recommendations for allocations in 2009: $40 million each for number of degrees produced and for improvement in the number of degrees produced (both weighted for critical fields and at-risk students) and $20 million for scholarships for the top 10 percent of high school graduates. This $80 million for outcomes-based funding was small in comparison to total public higher education funding but called a “sign of things to come.” Starting in 2009, the Coordinating Board used Lumina funding for an outreach strategy to gain support for different performance-funding models. Higher education leaders in the state said that implementation grant activities and the work of the state advisor played key roles in the policy development. In 2011, the Legislature mandated the coordinating board to recommend new formulas for all public institutions. In 2013, the Legislature adopted performance funding for community and technical colleges which had worked with the coordinating board to develop models that reflected the missions of their institutions. The Legislature did not adopt performance funding for four-year institutions. Additional proposed legislation increasing the amount of state funding contingent on performance from 10% to 25% appears to have undermined efforts to adopt the 10% model for four-year institutions. The status of performance funding for universities going forward is not clear. Some see it as a dead issue for the near term. Others foresee the largest turnover in state leadership in nearly two decades in the next legislative session and a unique opportunity to put new ideas regarding performance funding on the table.

Of the two states that did not select performance funding as a priority in their implementation grants, Maryland lacks experience in performance funding while Ohio has a long history. Grant teams in each state participated in nonpartisan Strategy Labs Network briefings and stakeholders became engaged in strategies for policy development.

• Maryland did not prioritize performance funding in its original proposal, but Strategy Labs briefings and other activities led to preliminary discussions about this issue. For example, state legislators, after attending a nonpartisan Strategy Labs briefing at the National Conference of State Legislatures, requested technical assistance to provide legislative hearings on the topic. The Legislature mandated that the Maryland Higher Education Commission report on
performance-funding models in 2012. The Legislature requested a follow-up report in 2013 examining the implications of the proposed framework. Higher education leaders in the state credited Lumina’s support in helping to keep this issue before state leaders.

- Ohio’s performance-based model was highlighted in national Strategy Labs Network activities, but was not a grant priority for the state. In 2009, the state enacted substantial reforms to its formulas, further incorporating performance components (80% of funding for four-year institutions was performance based, as was 10% of funding for two-year institutions). In 2012, the Governor asked institutional leaders to come together and provide recommendations to revise the formulas with even greater emphasis on outcomes. Those recommendations, which the Legislature enacted in 2013, will result in 100% of state funding for both four-year and two-year public institutions being distributed according to performance criteria beginning in the 2014-2015 academic year. To assist in developing a formula for the two-year institutions, some simulations were run in late 2013 as part of a process facilitated by HCM Strategists through the Ohio Association of Community Colleges. Multiple respondents described this process, and the role that HCM Strategists played, as helpful.
<table>
<thead>
<tr>
<th>Status at start of grant</th>
<th>Key Support from Lumina</th>
<th>Status as of December 2013</th>
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</thead>
</table>
| AZ                      | • Little or no history of performance funding.  
                        | • The Legislature required the Board of Regents to implement performance funding by 2012. | • The Board of Regents has a performance-funding formula for universities, and the concept of performance funding is supported by the Governor and Legislature.  
                        | • Lumina grant funded a consultant as an intermediary on performance funding with the universities and community colleges.  
                        | • Consultant’s reports were influential in moving performance funding forward. | • As of FY 2014, less than 1% of total university state funding was allocated based on performance funding.  
                        | • The Board of Regents has a performance-funding formula for universities, and the concept of performance funding is supported by the Governor and Legislature.  
                        | • With a separate Lumina grant, the chancellor of Maricopa Community College District is leading a national task force to develop a performance-funding model for consideration by community colleges. |
| IN                      | • Long history of performance funding.  
                        | • Has been a model for other states. | • Indiana modified its performance-funding approach to:  
                        | • Supported Chamber of Commerce and Commission for Higher Education outreach to legislators and creation of Trustees Academy. | • take into account different institutional missions,  
                        | | • revise its performance-funding formula twice, and  
                        | | • increase the percentage of appropriations awarded through performance funding from 1.6% to 5.5%. |
| MD                      | • No history of performance funding, but made some moves in that direction in 1998. | • Not an original focus of Maryland’s grant, but has been a focus of discussions for Maryland’s grant team, especially after legislators became interested and held state legislative briefings with Strategy Labs Network support. | • At the request of the General Assembly, the Maryland Higher Education Commission prepared a report on performance funding in 2012.  
<pre><code>                    | | • In 2013, again at the request of the General Assembly, the Commission prepared a second report further exploring the potential impacts of the Commission’s proposed performance-funding framework. The 2013 report included comments from institutional leaders, who were skeptical that performance funding is a good choice for Maryland. |
</code></pre>
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<thead>
<tr>
<th>State</th>
<th>Status at start of grant</th>
<th>Key Support from Lumina</th>
<th>Status as of December 2013</th>
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</table>
| MT | No history of performance funding. | - Implementation grant helped to establish performance-funding task force, and supported multiple briefings to task force and to the Montana University System Board of Regents about performance-funding models.  
- In 2013, Public Agenda facilitated faculty focus groups to get input as performance-funding models are developed. | - After a slow start, Montana moved forward rapidly in 2013. One-time performance formulas will be implemented in academic year 2014-2015.  
- More permanent metrics, currently under development by a Performance Funding Steering Committee, are expected to be implemented beginning in academic year 2015-2016. |
| OH | Long history of performance funding. | - Not a focus of the original grant.  
- The Strategy Labs Network highlighted Ohio’s model in their work with other states.  
- In 2013, HCM Strategists and Public Agenda facilitated discussions among Ohio’s community colleges as they developed a new performance-funding model. | - Existing state performance-funding formulas were up for revision in 2013.  
- At the suggestion of institutional leaders, legislators revised the state’s performance-funding formulas so that beginning with the 2014-2015 academic year, 100% of allocations for both universities and community colleges will be based on student success measures.  
- In addition, the stop-loss provisions were eliminated and institutions will be awarded proportional credit for transfer students. |
| TN | Long history of performance funding, but only 5% of state funding was based on student academic achievement. | - Lumina sponsored a supply-and-demand study which showed a mismatch between what skills are available and what is needed.  
- Strategy Labs highlighted Tennessee’s work, increasing its credibility on a national level. | - In 2010, Tennessee passed legislation to implement an outcomes-based formula, which goes beyond the traditional performance-funding paradigm, to include completion and other student success measures.  
- The outcomes-based formula removed enrollment completely from the model and expanded incentive funding from 5% to 100% of operating allocations, with the impacts of the formula phased in over a three-year period ending in academic year 2013-2014. |
<table>
<thead>
<tr>
<th>TX</th>
<th>Status at start of grant</th>
<th>Key Support from Lumina</th>
<th>Status as of December 2013</th>
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<tr>
<td></td>
<td>- In 2007, the Legislature appropriated $100 million for incentive funding in FY 2009</td>
<td>- The Lumina grant helped fund an outreach strategy by Texas Higher Education Coordinating Board to gain support for outcomes-based funding models different than that recommended by the Governor’s task force.</td>
<td>- In 2012, the Texas Higher Education Coordinating Board approved and sent to the Legislature and Governor outcomes-based formulas for public universities, community colleges, and technical colleges.</td>
</tr>
<tr>
<td></td>
<td>- In 2008, the Governor created a task force to develop recommendations for an incentive funding program to reward student and institutional outcomes aligned with state and regional priorities.</td>
<td>- The state’s HCM Strategists advisor and Strategy Labs Network resources played a key role in several national and state-level briefings and convenings on performance funding that were attended by legislators, executive branch staff, and higher education leaders.</td>
<td>- In 2013, the Legislature adopted performance funding for community and technical colleges, but not for four-year institutions.</td>
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<td>- With Lumina’s support, the Coordinating Board is exploring the impacts of additional factors in performance-funding formulas.</td>
<td>- While discussions continue at the Coordination Board, the status of performance funding for four-year institutions is not clear, especially for the near term.</td>
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</table>
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 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. Table 3 shows the percent of state operations funding allocated to four-year, two-year and technical colleges based on outcomes in each of the seven states. Table 3 also indicates whether the state formulas have metrics to encourage completion by under-represented students, metrics to encourage completions in critical fields such as STEM, metrics rewarding progress and/or transfer, and whether the metrics take into account differences in two-year and four-year missions.

**Table 3.**

Where States Stand on Performance Funding “Issues that Bear Watching”

<table>
<thead>
<tr>
<th>Percentage of state operations funding for higher education that is contingent on performance metrics:</th>
<th>AZ</th>
<th>IN</th>
<th>MD</th>
<th>MT*</th>
<th>OH**</th>
<th>TN</th>
<th>TX</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-yr</td>
<td>&lt;1%</td>
<td>5.5%</td>
<td>0%</td>
<td>5%</td>
<td>100%</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>2-yr</td>
<td>0%</td>
<td>5.5%</td>
<td>N/A</td>
<td>5%</td>
<td>100%</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Technical</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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</table>

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<tr>
<th>Metrics to encourage completion of under-represented students</th>
<th>No</th>
<th>4-yr</th>
<th>N/A</th>
<th>No</th>
<th>4-yr</th>
<th>4-yr</th>
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<td>2-yr</td>
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<td>2-yr</td>
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<td>2-yr</td>
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<tr>
<th>Metrics to encourage completion in critical fields, such as STEM</th>
<th>4-yr</th>
<th>4-yr</th>
<th>N/A</th>
<th>No</th>
<th>4-yr</th>
<th>No</th>
<th>2-yr</th>
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<th>Progress metrics along the way to completion, for specified student populations</th>
<th>4-yr</th>
<th>4-yr</th>
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<th>4-yr</th>
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<th>Metrics that account for different missions by sector</th>
<th>4-yr</th>
<th>Yes</th>
<th>N/A</th>
<th>No</th>
<th>Yes</th>
<th>Yes</th>
<th>2-yr</th>
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<td>Tech</td>
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<tr>
<th>Metrics to encourage transfer</th>
<th>No</th>
<th>No</th>
<th>N/A</th>
<th>No</th>
<th>2-yr</th>
<th>4-yr</th>
<th>2-yr</th>
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<td>2-yr</td>
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<td>2-yr</td>
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Notes: This is a listing of some measures, not all measures across the states.
* Information reflects Montana’s pilot performance-funding model to be implemented in 2014-2015. A more permanent model, planned for implementation in 2015-2016 and beyond, is under development and will likely include additional elements.
** Information reflects planned implementation in 2014-2015, however two-year formulas were not final as of December 2013.
Broad support among state and institutional leaders

Based on interviews and site visits with higher education leaders, there appears to be broad support in the seven states for the concept of performance funding in higher education, although concerns remain regarding implementation. The extent to which perceptions changed during the grant period is unknown, but higher education leaders in several states suggested that nonpartisan grant and Strategy Labs Network activities were effective in making the case for performance funding and keeping it in the forefront of state discussions. Most states had already developed some history with performance funding, so the concept was not new to institutional leaders.

Effects on institutional behavior

Higher education leaders who spoke with SPEC asserted that state policy discussions around performance funding catalyzed productivity discussions and led to some action at colleges and universities. In several states, institutional leaders said they had participated in discussions within their college or university about ways to improve institutional performance based on the metrics in use. One leader described these discussions as “nonstop.” The conversations at institutions were said to be shifting toward valuing graduation, student retention, and student success in courses and programs. More than one institutional leader noted that more conversations on campuses are now focused directly on students and their needs, perhaps suggesting that institutions are becoming more student-centric.

Beyond conversations, many higher education leaders pointed to changes underway in their college or university in response to performance funding. These changes included new four-year tuition guarantees and implementation of new programs aimed at supporting student success. An independent, externally-funded comprehensive study of the impact of performance funding on institutional behavior is currently underway in Tennessee and is expected to provide valuable documentation.

Several leaders in different states also pointed to the development of new student incentives to encourage more students to complete degrees and certificates on time that were in response to performance funding. The incentives occurred at the institutional level (not across entire states) and are described in Step Two of this report. They include free tuition for online courses and for credits earned in excess of 12 per semester, and cash incentives for on-time graduation.

Higher education leaders in some states expected to see more of an impact from performance funding than those in other states. In Ohio, for instance, leaders reported much more openness among institutions to completion strategies such as prior learning assessment as a result of the state’s shift to 100% performance funding. In Arizona, on the other hand, leaders noted that performance-based funds, at less than 1% of the state allocation to four-year institutions at the time data were being collected for this evaluation, were only one of many factors motivating institutions to improve productivity. Although it may seem that higher percentages of performance funding are more desirable, higher education leaders in Indiana indicated that the 5.5% of performance-based funds in their state were enough to capture institutions’ attention and initiate changes to improve productivity. Indiana educational leaders also pointed out that making too much of the state funding contingent on performance could have the unintended consequence of leading institutions to pay insufficient attention to aspects of their missions that are not rewarded by performance funding.
Considerations about performance funding

At the same time that SPEC found broad support for the concept of performance funding among higher education leaders, concerns among institutional leaders about implementation were also found, particularly about metrics and their use. During the grant period, several states found that involving institutions and faculty in the development of or changes in the funding formulas helped to address these concerns. There were several considerations, all of which have been documented in prior research on performance funding.\(^9\) It is too soon to know whether these concerns are warranted in the seven grant states, but they suggest useful areas for conversation as states continue to move forward with developing and implementing performance funding 2.0.

1. Quality of the academic degree. A persistent concern voiced by institutional leaders was that the emphasis on course and degree completion in performance formulas could pressure institutions to inflate grades or to graduate students who are not ready. Attempts are being made to include measures for degree quality in some formulas. Tennessee, for example, has included a metric since the early 1980s that rewards institutions for its graduate pass rates on credentialing exams.\(^10\) Many leaders in other states said, however, that quality is not included in the formulas because it is too difficult to define and, therefore, to measure. The quality conundrum is a fundamental measurement challenge that carries implications across the productivity work.

2. Unintended incentives. Institutional leaders voiced concern that some metrics reward (or penalize) institutions for things that they cannot or should not control, and can lead to unintended or perverse incentives. Such incentives can lead to the system being less rather than more productive. One concern was that institutions could decide to become more selective in admissions. Rewarding institutions for STEM degrees (a criterion in Indiana’s funding formula) was one example given in which faculty or staff could feel pressure to encourage students toward certain programs regardless of the students’ interest in that field. As another example, in Tennessee there were proposals by two-year institutions to expand the range of one-year certificates, some inappropriate, in order to qualify for additional performance funding. Models can be designed to address concerns about unintended incentives. For example, Tennessee’s formula penalizes institutions for becoming more selective.

3. Fairness to student needs and institutional missions. Both state and institutional leaders expressed concerns about assuring that the funding criteria and weights recognize the diversity of student needs and institutional missions in the state. SPEC’s analysis of the five performance-funding formulas in existence as of December 2013 revealed that three states (Indiana, Ohio, and Tennessee) had funding criteria that rewarded completion of low-income or underrepresented students while the Arizona, Texas and Montana formulas did not. A president of a community college in Maryland, which does not have performance funding, questioned whether it is possible to come up with formulas that adequately take into account the transfer and workforce training aspects of community college missions. For Lumina in particular, these issues are important because of its commitment to enhancing opportunities for low-income and underprepared students. Some institutional leaders identified data sources and their use as an issue of fairness—for example, a rolling average of graduation rates can yield very different results than a year-to-year calculation. Also, formula calculations may reflect historical situations and decisions rather than recent institutional actions. Depending on the measure, it could take several years for institutional changes to result in improvement on a metric.
4. **Alignment with state priorities.** According to state policymakers and higher education leaders, it is important that the priorities embedded in performance-funding formulas are aligned with state priorities. For example, some states reward institutions based on measures of student progress and degree completion, and their use of specific metrics suggests specific policy priorities. For example, Indiana includes among its measures degree completion by low-income students (Pell Grant recipients), STEM degrees, and on-time graduation. Ohio rewards success in remedial programs and successful transfers at the community college level. Tennessee rewards institutions for one-year certificates and for the number of students who successfully complete professional certification exams. Over time, states may need to adjust their measures to reflect changes in state priorities and recent research.

5. **Shifting Metrics.** Some leaders expressed concerns about the propensity of performance formulas to be revisited too frequently by state policymakers. For example, since its 2007 formula, Indiana changed its funding formula metrics every two years, at least the latest time in response to input from institutions. Ohio’s most recent formulas had only been in place for two years before the extensive 2013 revisions – not enough time to assess how the policies were working.

6. **The share of state funding devoted to performance.** Some leaders expressed concerns about the appropriate percentage of state funding that should be devoted to performance funding. Indiana devotes a relatively small share of state higher education spending to performance funding (5.5%), yet higher education leaders there reported effects on institutional behavior. At the other extreme, Ohio and Tennessee have set aside nearly all of their state operating appropriations to colleges and universities for outcomes-based funding. Research has suggested that performance funding, to be effective, needs to be substantial enough to change institutional attitudes and behavior. Over time, it will be important to evaluate institutional changes in each of these states.
Chapter 2
Step Two: Student Incentives

Strategic Use of Tuition and Financial Aid to Incentivize Course and Program Completion

Step Two focuses on creating new or improving existing financial incentives aimed at helping students complete degrees and certificates. Two key policy areas are associated with these issues:

1. **State financial aid policies.** With nonpartisan support and information-sharing from the productivity initiative, some states and systems of higher education revised student financial aid programs during the grant period, to encourage more students to stay on track and graduate on time. The states and higher education systems experimented with the following strategies: allowing aid to cover summer terms, enacting caps for excessive credits, requiring students to maintain a higher grade point average to continue receiving state financial aid, and providing loan forgiveness for on-time graduation. Researchers have found that simple, transparent financial incentives do affect student behavior and that linking financial aid to academic performance can bolster the impact of financial aid on college completion for some groups of students. However, the researchers acknowledge that additional work is needed to understand the relationship between specific aid programs, student incentives, and student outcomes, particularly for various student populations. 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; or the appropriate mix of tuition, state appropriations, and financial aid in supporting higher education.

2. **Tuition policies.** Tuition policy incentives were also of interest among states, systems, and institutions of higher education. Tuition policies to incentivize student completion included: tuition freezes for incoming students for a set number of years (by institution, or institution type or program); flat tuition for specific students (such as those who enter as freshmen and who persist each year); tuition caps regardless of the number of credits taken above a set number; tuition surcharges for excess credits; 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; and reduced summer school tuition or fees.

Across all seven states, state leaders participated in Strategy Labs Network briefings on financial incentives to improve student completion, including information about the effectiveness of need-based grants and scholarships in supporting retention and degree completion of low-income students. These nonpartisan briefings appear to have increased consideration of student financial incentives by state policymakers and higher education leaders.

Table 4 provides an overview of the changes identified in student incentives for completion across the seven states.
### Table 4.
Overview of Step Two: Changes Identified in Student Incentives for Completion through December 2013

<table>
<thead>
<tr>
<th>State</th>
<th>Status at start of grant</th>
<th>Key support from Lumina</th>
<th>Status at end of 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>AZ</td>
<td>History of low levels of student aid provided by state; most is provided by institutions.</td>
<td>Grant activities encouraged an increase in university / community college partnerships (see Step 3 section of report) that provide pathways that decrease student tuition burden for bachelor’s degrees.</td>
<td>In 2013, the state enacted legislation to establish a five-year pilot program waiving tuition for foster children at public universities. The percentage of tuition universities are required to set aside for financial was increased. No other changes in state-level student aid policy. Institutions are experimenting with performance-based aid programs. Northern Arizona University now guarantees flat tuition for four years for students who maintain full-time enrollment.</td>
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<td>Some university / community college articulation partnerships which lower a student’s overall tuition outlay predate Lumina grant.</td>
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<td></td>
<td>Universities are required to increase the pool of student aid dollars proportional to any tuition increases.</td>
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<td></td>
<td>Arizona State University has a tuition commitment program that links students' tuition rates with their semester of acceptance to the university.</td>
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<td>IN</td>
<td>History of need-based aid for most state scholarships.</td>
<td>Not a focus of implementation grant but Indiana participated in some Step Two Strategy Labs activities.</td>
<td>In 2013, the Legislature set four-year financial aid scholarships at a base level depending on high school performance, with progression benchmarks for continued aid and added awards for faster progress and college GPA. Separate 2013 legislation restricts eligibility for the state’s Part-Time Grant to students who enroll in 6 credits per semester and complete 18 credits per year. In 2012, several universities announced reduced summer school tuition. Indiana University announced that tuition is frozen during junior and senior years at the sophomore year rate for sophomores on track to graduate in four years. Indiana State University offered free tuition after four years to students who followed approved</td>
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<td></td>
<td>No history of student incentives for college completion associated with financial aid.</td>
<td>Separately, HCM Strategists produced a report for the Indiana Commission for Higher Education on options for financial aid incentives.</td>
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<td>Status at start of grant</td>
<td>Key support from Lumina</td>
<td>Status at end of 2013</td>
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<td>pathways and took other appropriate steps but had not graduated in four years.</td>
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<td>• Indiana University began applying a tuition surcharge for students who take more than 144 credits without earning a degree.</td>
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<td></td>
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<td>• Ball State University and Indiana University also offered flat-rate tuition and summer discounts to encourage continuous, full-time enrollment.</td>
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<td>MD</td>
<td>• Strategic plan emphasizes completion and financial aid awards for low-income and minority students.</td>
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<td>• MD has a successful “reverse transfer” program that allows former community college students to apply course credits from four-year institutions back to their community colleges to earn an associate degree.</td>
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<td>• After its planning year, MD proposed using student incentives to increase completion, but Lumina did not fund that effort, so it was not a focus of the implementation grant.</td>
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<td>• The grant team remained interested and participated in Strategy Labs activities about this topic.</td>
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<td>• Partly as a result, in 2012, the team worked with the Maryland Higher Education Commission to encourage four-year institutions to develop pilot incentive programs for adult “near-completers” to finish their degrees.</td>
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<td>• Lumina awarded Maryland Higher Education Commission a grant to further this work.</td>
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<td></td>
<td>• University System of Maryland Foundation agreed to fund similar work in 2012.</td>
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<td></td>
<td>• Additional state funding allowed the University System of Maryland to keep tuition increases lower than the national average, with no increases for four years.</td>
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<tr>
<td></td>
<td>• In 2013, Maryland Higher Education Commission and University System of Maryland implemented complimentary pilot incentive programs for adult “near-completers.”</td>
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<td></td>
<td>• In 2013, Maryland passed an omnibus College and Career Readiness and College Completion Act that includes (among other things) directives to focus on near completers, incentives for students to obtain an associate degree before enrolling in a public four-year institution, and a standard number of credit hours for two and four-year degrees.</td>
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<tr>
<td>State</td>
<td>Status at start of grant</td>
<td>Key support from Lumina</td>
<td>Status at end of 2013</td>
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<tr>
<td>MT</td>
<td>History of low student aid provided by state.</td>
<td>At several Lumina convenings and Strategy Labs events, grant team members learned about possible options for incorporating student incentives for completion into financial aid programs.</td>
<td>In 2013, the Regents recommended an increase in need-based aid, but the Legislature did not take action. Tuition freezes since 2007 continued at two-year institutions. There were freezes for six of the last eight years at comprehensive master's degree granting institutions; and for four of the last eight years at the two flagship universities.</td>
</tr>
<tr>
<td>OH</td>
<td>Piloted (with MDRC) a performance-based scholarship program in 2008 for low-income students who earn at least a “C” in 12 or more credits per term.</td>
<td>Not a focus of implementation grant.</td>
<td>Final results from the MDRC pilot program showed that participants earned more credits and were more likely to complete a degree. In 2012, the Board of Regents created a task force to identify promising practices related to completion. The task force recommended performance-based incentives, but action has not been taken. In 2013, legislation was passed that will allow public institutions to offer four-year tuition guarantees to each cohort of incoming students.</td>
</tr>
<tr>
<td>TN</td>
<td>History of student aid programs, mostly merit-based, funded through the state lottery.</td>
<td>Not a focus of implementation grant. However, the state’s HCM Strategists advisor served as a consultant to lottery scholarship discussions. Separately, in 2013 the coordinating board received a Lumina grant to look more closely at student aid. In addition, the state team learned about tuition incentives at Lumina convenings.</td>
<td>In 2012, HOPE Lottery Scholarship guidelines were revised so that the funds can now be used to attend summer school, and have been limited to 120 credit hours to encourage faster completion. A state task force also recommended that the eligibility requirements for merit-based lottery scholarships be increased, but no action has been taken. The Board of Regents imposed a new tuition charge on students taking more than 12 credits</td>
</tr>
<tr>
<td>TX</td>
<td>Status at start of grant</td>
<td>Key support from Lumina</td>
<td>Status at end of 2013</td>
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</table>
|    | • College for All Texans initiative provides a $1,000 tuition rebate for students who graduate with no more than three semester credit hours beyond the minimum required for their degree.  
• B-On-Time Student Loan Program provides forgivable loans to full-time undergraduates who maintain a high academic standard and graduate within four years. | • Student financial incentives for completion were not a focus of the implementation grant, but policymakers in 2011 and 2012 participated in several Strategy Labs convenings and briefings on this topic, and it is now a priority. | per term beginning in the 2013-2014 academic year. |
|    | • Texas made sweeping changes in student financial aid.  
• In 2011, academic prioritization criteria were incorporated into the need-based Texas Grant.  
• In 2013, legislation re-aligned major state grant and loan programs to focus on either public university or community college students, not both.  
• The Legislature also directed the coordinating board to study the relationship between grant aid and student persistence; a report is due in October 2014.  
• Following its 2011 challenge, the Governor’s Office reports that 13 institutions have developed $10,000 degree programs but requirements make it difficult for students to complete.  
• Also in 2013, legislation was passed requiring most public universities to offer a fixed tuition plan. |
Financial aid incentives: Extensive discussion and some legislative action

At the start of their productivity work, only two states, Ohio and Texas, had a history, albeit limited in scope, of providing state financial aid incentives for students to complete. In 2008, Ohio piloted a scholarship program for low-income students who maintained at least a "C" in at least 12 credits per term. Texas had a program that provided a $1,000 rebate for students who graduate with a limited number of credits outside their major.

During the grant period, with some support from Lumina and the Strategy Labs, four states prioritized activities in this area: Montana, Indiana, Maryland, and Texas.\(^{15}\) Indiana, Maryland, and Texas saw legislative action but it is not yet clear whether the changes will lead to higher completion rates for all groups of students.

- Montana grant team members attended Lumina convenings and Strategy Labs Network site visits where they engaged in discussions concerning Step Two policy changes. In 2013, the Board of Regents requested that the Legislature increase state need-based student financial aid, but the Legislature did not take action.

- Indiana received technical assistance from HCM Strategists outside of the Strategy Labs to prepare a report for the Indiana Commission for Higher Education on options for creating financial aid incentives for completion. Based on the report’s recommendations, legislation passed in 2013 that sets four-year scholarships at a base level depending on high school performance, with added award incentives for college GPA and steady progress toward a degree.\(^{16}\)

- In Maryland, the state team focused on understanding and developing incentive programs for adult “near-completers” to finish their degrees. In 2013, the Maryland Higher Education Commission and the University System of Maryland (USM) implemented one-year complimentary pilot programs in four-year institutions. A no-cost extension of the Lumina grant will help fund administrative and evaluation costs for the USM pilot. Also in 2013, legislation was enacted requiring the state Higher Education Commission and public colleges and institutions to implement incentives for students to obtain associate degrees before enrolling in four-year institutions. More specifically, the legislation requires public four-year institutions to dedicate a portion of institutional financial aid to resident undergraduates who transfer with an associate degree from a state community college.

- Texas initiated significant changes in student financial aid without focusing Lumina funds on this area. In 2011, academic prioritization criteria were incorporated into the need-based TEXAS Grant for first-time entering students to ensure that those who were best qualified and prepared for college received priority when funding was limited. In 2013, the Legislature limited recipients of the TEXAS Grant and the B-On-Time Loan Program to students at public universities and health-related institutions, thereby eliminating new recipients at two-year colleges beginning in fiscal year 2015 (i.e., fall 2014). The new law also increased student participation and rate of loan forgiveness for B-On-Time, and required development of a financial literacy program to help students avoid incurring large debts. The Coordinating Board
provided information to legislators about potential additional revisions to the TEXAS Grant to encourage shorter time-to-degree, but the board did not advocate strongly for these changes and no legislation has been proposed. However, the Legislature has directed the Coordinating Board to study the relationship between grant aid and student persistence; a report was due in October 2014. Although the state did not invest its Lumina grant funds in this work, its participation in the Strategy Labs helped build a foundation of further discussion and information dissemination among state policymakers and higher education leaders for future work in this area.

In the three states that did not prioritize work in this area (Arizona, Ohio, and Tennessee), nonpartisan Strategy Labs Network briefings appeared to create discussions among the state teams. Ohio and Tennessee had histories of discussing financial incentives for completion:

- In 2011, the Arizona Board of Regents completed a five-year analysis of student aid, but the only change to state policy was legislation passed in 2013 that establishes a five-year pilot program waiving tuition for foster children at public universities. Years prior and continuing after the Lumina grant, the Board of Regents mandated that each university increase the set aside of tuition revenue for need-based financial aid from 8% to 14%. The pool of student aid dollars increases proportionately with tuition. In addition, the board has raised the percentage an additional 3% to 17% most years.

- The Ohio Board of Regents created a task force in 2012 to identify promising practices related to completion, including student incentives. Performance-based incentives were among the practices recommended, but it remains to be seen whether institutions will adopt these recommendations.

- In Tennessee, HOPE Lottery Scholarship guidelines were revised so that the funds can now be used to attend summer school, and have been limited to 120 credit hours to encourage faster completion. A state task force also recommended that the eligibility requirements for merit-based lottery scholarships be made more stringent, but no action had been taken and none was expected at the time data collection for this evaluation ended.

Tuition incentives: Some discussions and some tuition freezes

None of the states made tuition a priority in their implementation grants. However, tuition strategies were discussed in most states, and some actions were taken. For example, some form of tuition freeze policy was implemented in six states:

- Arizona: Northern Arizona University now guarantees flat tuition for four years for students who maintain full-time enrollment. Arizona State University has a tuition commitment program that links students’ tuition costs to their semester of acceptance to the university, including dual enrollment students at community colleges.

- Indiana: Indiana University announced a tuition freeze after sophomore year at the sophomore rate for full-time students on track to graduate in four years. Indiana University also imposed a tuition surcharge for students who continue enrollment after taking more than 144 units
without earning a degree. Indiana State University offered free tuition after four years for students who had followed what was needed to graduate but had not graduated due to the fault of the institution. Ball State University and Indiana Universities also offered flat-rate tuition and summer discounts to encourage continuous, full-time enrollment.

- **Maryland:** With the help of additional state funding, the University System of Maryland kept tuition increases lower than the national average, with no increases for four years. Between 2007 and 2012, tuition at University System four-year institutions rose only 2% after adjusting for inflation.

- **Montana:** For eight years, the Board of Regents has frozen tuition at the University System’s two-year institutions. For six of those years, the Regents froze tuition at the University System’s comprehensive master’s degree granting institutions. Montana’s higher education leaders feel that the resulting differential between the two-year and master’s degree granting four-year institutions relative to the two public flagship universities provides an incentive for students to take advantage of the lower cost of attending the smaller institutions.

- **Ohio:** In 2013, a number of public institutions expressed interest in guaranteed tuition models, where tuition rates are locked for four years for each cohort of incoming students. To accommodate such models, legislation was passed allowing institutions to exceed state-mandated tuition caps in each cohort’s first year.

- **Texas:** A few institutions are designing bachelor’s degrees to be offered to students for $10,000, but what is included in this price varies and often requires dual credits as high school students prior to college enrollment. Several community colleges believe they already have met this threshold in the price of their bachelor’s degree programs for applied science. A joint project of South Texas College, Texas A&M University-Commerce, and the Texas Higher Education Coordinating Board, funded through an EDUCAUSE Next Generation Learning Challenges Grant, will result in the development of a competency-based, low-cost Bachelor of Applied Sciences in Organizational Leadership. Separately, in 2013, legislation was passed requiring that most public universities offer a fixed tuition plan. Tennessee moved toward higher tuition charges when in 2013 the Board of Regents imposed a new tuition charge on students taking more than 12 credits per term at system institutions. One reason for the change was to more evenly distribute costs between full-time students (who tended to take more courses per semester) versus part-time students. On the other hand, at least one institution, the University of Tennessee Knoxville, has a flat tuition rate of 15 hours for full-time students. This fixed rate encourages full-time enrollment of 15 or more credit hours.

Some states have a history of reduced or no tuition for high school students enrolled in dual credit programs, including Ohio and Texas. During the grant term, Montana’s Board of Regents adopted a 50% tuition discount for high school students enrolled in dual credit courses and Montana’s Flathead Valley Community College implemented a policy of no tuition for dual credit students enrolled in their first six credits.
Considerations about serving students who attend part time

Both financial aid and tuition policies that incentivize completion tend to focus on graduating students in a timely manner, ideally within four years for a bachelor’s degree or two years for an associate degree. While there is research that shows that full-time enrollment is positively correlated with completion, the reality is that many low-income students attend part time to accommodate work or family responsibilities, or for other reasons. There were some concerns expressed, particularly by higher education institutional leaders, about ensuring that any new student aid requirements be balanced, so that the needs of low-income students, many of whom attend part time, are addressed. The concerns involved ensuring that these students, who are already under-represented in higher education, do not become ineligible for student aid due to their part-time status, which can often add years to their time in college. This need is becoming more important as the number of part-time students who may be eligible for need-based scholarships is increasing.

Incentives that could potentially disadvantage part-time students include time limits on financial aid and flat-rate tuition structures. Similarly, such students cannot take advantage of tuition guarantees or cohort-based tuition freezes that require graduation in four years. Low-income students who work in the summers to pay their tuition the rest of the year cannot take advantage of summer term discounts.
Lower-Cost, High-Quality Approaches Substituted for Traditional Academic Delivery Whenever Possible to Increase Capacity for Serving Students

Along with performance funding, the development of new academic delivery models and the redesign or reform of existing models generated the most activity and outcomes in the states. All seven state teams engaged in multiple implementation grant or Strategy Labs activities focused on Step Three. In most cases, these activities involved building on existing reforms that were in progress before the grant cycle began (some of which were supported by Lumina activities) and will likely continue, in one form or another, after Lumina support ends. That is, in most cases what was innovative was not brand new initiatives. Rather, innovation occurred most often by repurposing existing programs and delivering them in new or expanded ways across new settings.

As shown in Figure 1, work in the states fell into four categories:

1. High school-based accelerators
   - Dual enrollment, dual credit, and early college high schools.

2. Improved remediation and gatekeeper courses
   - 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.

3. Improved transfer from two-year to four-year institutions
   - 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.

4. Quicker completion
   - All of the previous strategies, plus electronic student advising, predictive analytics, prior learning assessment, competency-based credits, and three-year degree pathways.

As shown in Figure 1, work in the states fell into four categories:

- High school-based accelerators, including dual enrollment, dual credit, and early college high schools.
- Improved remediation and gatekeeper courses, including redesign of developmental education, the shift of developmental education to high schools or two-year institutions, and course redesign of gatekeeper and other classes.
- Improved two-year to four-year transfer, including pathway partnerships, articulation and transfer legislation, Tuning and Fine Tuning, establishment of a common core, regional campuses and hubs, expanding the mission of two-year institutions, system redesign, and reverse transfer.
- Quicker completion, including electronic student advising, predictive analytics, prior learning assessment, competency-based credit, and three-year degree pathways.

Table 5 lists the new models and reforms of existing models identified in the seven states through 2013.
Table 5.
Overview of Step Three: New Models and Reforms of Existing Models Identified through December 2013

<table>
<thead>
<tr>
<th>Status at start of grant</th>
<th>Key support from Lumina</th>
<th>Status at end of 2013</th>
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</table>
| **AZ**                                                                                  | • History of partnerships between two-year and four-year institutions, but no statewide transfer policies or common course numbering system. | • The implementation grant funded communications activities that supported expansion of two-year and four-year partnerships, including joint admission programs.  
• A Lumina-funded task force inventoried partnership programs and their enrollments.  
• Public Agenda provided ongoing support to the Strategic Engagement and Communications Committee, which promoted the partnership programs to students and other stakeholders statewide.  
• Lumina grant funds supported enhancements to web-based information on transfer and common course numbering. | • The number of collaborative pathway agreements between two-year and four-year institutions increased from 98 in 2010 to more than 1,200 in 2013, and continues to grow.  
• In 2010, the Legislature passed a law requiring statewide course numbering for lower-level courses at public two-year and four-year institutions.  
• The Board of Regents implemented a Shared Unique Number system that allows institutions to retain their own course numbers.  
• Separate from the state’s productivity work, in 2013, Northern Arizona University launched a competency-based online degree program targeting returning adult students. The program’s development was funded by several foundations, including Lumina. |
| **IN**                                                                                  | • Existing “core transfer library” of common courses, but not a common numbering system. | • Implementation grant supported trustee academies in 2010 and 2011, as well as a 2011 report on the role of regional campuses.  
• Lumina provided separate funding for marketing efforts of WGU Indiana.  
• Strategy Labs resources were used to conduct focus groups of student perspectives on transfer in order to enhance partnerships between Indiana University East and Ivy Tech.  
• Public Agenda conducted statewide engagement research and technical assistance around student pathways for regional transfer between Ivy Tech and Indiana University as well as improving approaches to online delivery. | • In 2012 legislation required commission for higher education to create a common course numbering system and a common general education core.  
• 2013 legislation capped associate degrees at 60 units and bachelor degrees at 120 units, with authorized exceptions.  
• In addition, the Commission for Higher Education must work with institutions to develop degree pathways by 2015.  
• Additional 2013 legislation pushed some remediation to the high school level.  
• Separate from the Lumina grant, Complete College America funded the redesign of remedial coursework at Ivy Tech. |
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<th>Status at start of grant</th>
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| • History of course redesign since 2006, at University System of Maryland.  
• History of online programs with competency-based course credit at University of Maryland University College, especially to U.S. military personnel.  
• University College also offers dual admission programs through 2 + 2 partnerships with two-year colleges.  
• State has eight Regional Higher Education Centers in underserved areas at which colleges bid to offer degree programs. | • Course redesigns were the primary focus of the implementation grant, to expand redesign statewide, including at community colleges and independent institutions.  
• In 2010, grant funds supported attendance of 30 faculty and administrators from two-year and four-year institutions at a national conference on redesign.  
• In 2011, University System of Maryland hosted a Strategy Labs site visit on course redesign.  
• State team commissioned Catalytica to create outreach videos on course redesign efforts and outcomes from perspectives of faculty, students, and administrators, and showed the videos to state policy staff and state and national audiences. | • At least 70 courses have been redesigned in Maryland (at least 40 within USM) using Lumina and other funding sources.  
• In 2012, a new Center for Academic Innovation was approved by the USM Board of Regents, with a focus on new models for academic delivery, including course redesign and the use of MOOCs (massive open online courses).  
• The Center is studying (through a sub-award from a $1.5 million Gates grant to Ithaka S+R) the impact of online teaching and learning modalities across academic disciplines.  
• In 2013, state budget legislation included $9 million for academic transformation, including an additional 50 course redesigns within USM.  
• Legislation passed in 2013 requires the Higher Education Commission to work with institutions to develop statewide transfer agreements between two-year and four-year institutions, and requires local boards of education to pay tuition costs for students who are dual-enrolled (they may charge students up to 50% of the cost).  
• Additional 2013 legislation requires the Higher Education omission and public institutions to develop and adopt prior learning assessment guidelines for veterans. |
| **MD** | • Incomplete two-year and four-year transfer policies due partly to limited mission of two-year Colleges of Technology.  
• Development of common course numbering system | | 
| **MT** | • Implementation grant focused on redesigning higher education delivery system, especially in expanding role of two-year technical colleges to provide broad lower-division general education courses and to serve as hubs for dual-enrollment, adult basic education, and workforce development. | • In 2010, the grant team worked with the Office of Public Instruction to create the Montana Digital Academy, which now serves as the online portal for dual enrollment in the state.  
• In 2012, the Regents approved a common statewide application for dual enrollment and set dual enrollment tuition at 50% of resident two-year tuition rates. |
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| in progress; existing transferable general education core.  
  - No strong history of dual enrollment. | • Also focused on aligning curricula between schools and colleges, especially online and through technology.  
  • Several studies completed on serving adult students better.  
  • Public Agenda assisted with institutional and student engagement of two-year colleges around mission expansion and rebranding. | • In 2013, the Legislature approved $1 million to expand dual enrollment at MUS two-year institutions.  
  • In 2012, the Board of Regents approved new names for the former Colleges of Technology and the two-year institutions created implementation plans to expand their missions.  
  • All undergraduate courses within MUS now have common course numbers and uniform outcomes.  
  • A pilot Tuning initiative is underway to align associate and bachelor’s programs in business between MUS two-year and four-year institutions.  
  • The grant team worked with the state’s Career and Technical Education program to articulate 350 pathways in 155 high schools, public two-year institutions, and two tribal colleges.  
  • 2013 legislation requires that the Regents develop prior learning assessment criteria for veterans. |
| **OH** | • History of transfer policies and dual enrollment.  
  - Strategy Labs resources and national meetings helped to shift Ohio’s grant focus to student completions, including through expansion of prior learning assessments.  
  - Public Agenda conducted focus groups with faculty and administrators about existing prior learning assessment practices as well as "One Year Option" programs.  
  - Strategy Labs convenings on course redesign also have energized Ohio’s work. | • The state’s 2011-12 biennial budget bill required public four-year institutions to develop 3-year degree pathways; all have done so but in some cases with heavy reliance on transfer and dual enrollment.  
  • In 2013, a statewide symposium on prior learning assessment led to the creation of a network to further the work statewide.  
  • Also in 2013, the Governor signed an executive order requiring that the Board of Regents work with institutions to develop prior learning assessment guidelines for veterans.  
  • 2013 legislation directs the Board of Regents to work with public institutions and the Department of Education to generate recommendations for statewide dual enrollment policies. |
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<tr>
<td>• History of dual credit, dual enrollment, transfer</td>
<td>• Implementation grant supported pilot projects to improve success of adult students through regional consortia of state universities, community colleges, and technical colleges.</td>
<td>• Additional 2013 legislation requires the development of “One Year Option” programs leading to a technical degree.</td>
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<td>pathways, and reverse transfer programs.</td>
<td>• Public Agenda completed a study on the barriers and enablers to college going and completion from the perspective of would-be students.</td>
<td>• The state’s major grant-funded initiatives, the two consortia intended to improve adult success, have had mixed results; key learnings may improve future efforts.</td>
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<td>• A separate Lumina grant sought to improve articulation between technical and community colleges, including introducing technical colleges’ “cohort” programs in community colleges. Cohort programs keep the same groups of students together in sequences of common courses lasting 2 or 3 years.</td>
<td>• Newly developed cohort programs in community colleges appeared to be successful but not of interest to most students.</td>
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<td>• The Complete College Tennessee Act, passed in 2010, required the development of course maps for community college students in popular majors, to facilitate transfer without loss of credit. These maps are now in place.</td>
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<td>• As required by the Act, the state’s colleges and universities agreed on a 41-credit common core.</td>
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<td>• Use of Degree Compass, an online advising tool funded by a grant from Complete College America, that recommends courses and majors based on predictive analytics, is being expanded.</td>
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<td>• A law passed in 2012 sought to spur the use of reverse transfers, but cross-system meetings identified the need for a state-level data system to make further progress.</td>
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<td>• In 2012, legislation was passed requiring the development and piloting of dual credit assessments that will be accepted for credit at all of the state’s public institutions.</td>
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<td>• Western Governor’s University - Tennessee was established in 2013. A program piloted in 2012 that provides developmental math courses to college-bound high school students will be expanded statewide in 2014.</td>
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<td>Status at start of grant</td>
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<td>Reverse transfer legislation passed in 2011 permits the awarding of an associate degree after students have transferred to a university.</td>
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<td>Also in 2011, WGU Texas created by Governor’s executive order to provide online, competency-based degrees.</td>
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<tr>
<td>TX</td>
<td></td>
<td>Several university campuses are exploring the use of MOOCs.</td>
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<td>Tuning Texas continues to make progress, but impact on transfer is limited to date.</td>
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<td>Statewide articulation compacts for 12 degree programs have been disseminated as memorandums of understanding, but not all four-year universities have signed.</td>
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<td>Efforts at Fine Tuning enabled the state coordinating board to significantly improve <em>Lower-Division Academic Course Guide Manual</em>, which is the basis for common course numbering and the transfer of course credits across institutions.</td>
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<td>A joint project of South Texas College, Texas A&amp;M University-Commerce, and the Higher Education Coordinating Board, funded through an EDUCAUSE Next Generation Learning Challenges Grant, will result in the development of a competency-based, low-cost Bachelor of Applied Sciences in Organizational Leadership that will be designed to provide the skills employers have identified as necessary for the 21st century.</td>
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<td>In 2013, legislation reduced the number of completed semester credit hours needed to initiate the reverse transfer process.</td>
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<td></td>
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<td>Additional legislation in 2013 requires the Texas Workforce Commission, coordinating board, and public...</td>
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### Status at start of grant | Key support from Lumina | Status at end of 2013
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| | | community and technical colleges to support competency-based programs aligned with regional workforce needs.
High school-based accelerators

The terms “dual enrollment” and “dual credit” are used differently in different states, and are often used interchangeably. Dual enrollment typically refers to high school students taking college courses (either at a high school or college) while they are still enrolled in high school. “Early college” is a form of dual enrollment that seeks to blend high school and college coursework so that most participating students graduate with a high school diploma and an associate degree or substantial college credits. Dual credit typically refers to credits a student earns in high school also being accepted by a college or university, including Advanced Placement courses.

Dual enrollment and dual credit policy change

Indiana, Maryland, Montana, Ohio, and Tennessee created new policies to expand dual credit opportunities, which jumpstart the earning of college credits for high school students.

- Indiana revised its dual enrollment/dual credit policies. However, who pays for dual credit courses can be an issue. In Indiana, the state pays institutions $50 per successfully completed dual credit hour. Institutions may charge students up to $25 per credit hour additionally, except for low income students. One Indiana provost limited new dual credit courses because of the costs his university was incurring.

- In 2013, Maryland passed legislation requiring local boards of education to pay tuition costs for students who are dual-enrolled (they may charge students up to 50% of the cost).

- In 2010, Montana created the Montana Digital Academy to serve as an online portal for dual enrollment statewide. In 2012, the Regents approved a common statewide dual enrollment application and set tuition at 50% of resident tuition at Montana University System two-year institutions. In 2013, the Legislature appropriated $1 million to expand dual enrollment within the University System.

- In Ohio, legislation passed in 2013 directs the Board of Regents to work with public institutions and the Department of Education to generate recommendations for statewide dual enrollment policies.

- Tennessee passed legislation that encouraged K-12 and postsecondary sectors to collaborate on scaling up dual enrollment and dual credit opportunities, as well as their articulation and transfer agreements, so that they reach every region of the state.

Early college high school policy change

None of the states created statewide policy around early college high schools, but Maryland’s Legislature allocated $2 million in 2013 to support expansion of early college programs and at least one new program was created in Ohio during the grant period.
Improved remediation and gatekeeper courses

Redesign of developmental education

New models for developmental education included adopting co-requisite models (where students take the developmental course alongside the for-credit course) and redesigning the traditional prerequisite models.

- In Indiana, Ivy Tech Community College piloted a co-requisite model for remediation with grant funds from Complete College America and the Indiana Commission for Higher Education. The co-requisite model was so successful that Ivy Tech committed its own funds to converting all remediation to co-requisites by 2014.

- In 2012, the Maryland Higher Education Commission received a $1 million grant from Complete College America to work with community colleges on developmental math redesign.

- In Montana, the Board of Regents adopted recommendations in 2013 for improving the coordination of the developmental education systemwide.

Moving remediation to two-year institutions or high schools

- In Indiana, the Commission on Higher Education issued new policies in 2010 that moved developmental education from four-year institutions to Ivy Tech Community College.

- In Ohio, as a result of legislation passed in 2007, state funding for developmental education is being phased out for public four-year institutions beginning in 2014; it will be eliminated completely by 2020.

- After two years of piloting, Tennessee is expanding statewide a program to test college-bound high school students in math during their senior year. Students whose scores indicate developmental placement are enrolled in a self-paced, computer-based course at the high school. Community college faculty members provide assistance.

Course redesign

Maryland’s course redesign work was underway within the University System of Maryland at the time of the grant proposal and was based on models modified from those available from the National Center on Academic Transformation. The work focused on integrating technology to lower costs and improve student success, particularly for large-enrollment, bottleneck courses. Lumina’s support helped to scale the work statewide by expanding it to community colleges and independent institutions. Evaluation results from the Lumina-funded course redesigns were expected in late 2014.

Individual institutions in Ohio and Texas, as well as the University System of Maryland, are exploring opportunities to use MOOCs (massive open online courses), which provide college-level courses to large numbers of students online for free. These efforts were not funded through the states’ Lumina grants.
Improved transfer from community colleges to four-year institutions

Articulation and transfer, including reverse transfer

Efforts to facilitate student transfer from two- to four-year institutions generated the most Step Three activities among states. At least six states sought to create a range of statewide policies for improved articulation and transfer of credits from two- to four-year institutions: Arizona, Indiana, Maryland, Montana, Tennessee, and Texas. In all seven states, the Legislature passed laws to improve transfer, but barriers to transfer remain. Some of the highlights include:

- Arizona’s transfer and articulation agreements between community colleges and universities, referred to as pathway programs, expanded during the grant period, but data are not yet available about the number of students taking advantage of them.²⁰ In 2010, the Legislature passed a law requiring statewide course numbering for lower-division courses at public two- and four-year institutions. The resulting Shared Unique Number system, implemented in 2012, allows institutions to retain their existing numbering systems but adds prefix numbers to each course that indicate equivalencies across all Arizona public community colleges and universities. Major enhancements were added to the AZTransfer website that helps students statewide to efficiently plan for transfer.

- The Indiana Legislature passed a law in 2012 that required the state Commission for Higher Education to create a common course numbering system and a common general education core in 2013. In addition, by 2015, the Commission must work with institutions to develop degree pathways for each program so that all approved two-year program courses automatically count toward the related four-year degree programs at any publicly funded Indiana university.

- In Maryland, the College and Career Readiness and College Completion Act of 2013 directed the Maryland Higher Education Commission to work with public institutions to develop statewide transfer agreements between two-year and four-year institutions. Public institutions are also required to develop degree pathways that outline specific courses of study that will result in degree completion.

- In Montana, in 2010, the Regents approved a set of fully articulated, commonly numbered courses guaranteed to meet university general education requirements and to transfer for full credit statewide.

- Legislation passed in Ohio in 2013 requires the development of “One Year Option” programs to be implemented beginning in 2014. Students who receive a one-year technical certificate will be granted 30 credits toward a technical degree upon enrollment in a public higher education institution.

- In Tennessee, Complete College Tennessee Act passed in 2010 required the development of Tennessee Transfer Pathway, which involves course maps for community college students in popular majors, to facilitate transfer without loss of credit. These maps are now in place. Also in 2010, as required by the Act, the state’s colleges and universities agreed on 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. A law passed in 2012 sought to spur the use of reverse transfers, but cross-system meetings identified the need for a state-level data system in order to make further progress.

- Tuning Texas (described below under “Tuning and Fine Tuning”) may be the most ambitious state initiative to improve transfer, since it relies heavily on faculty engagement and is based on developing common learning outcomes within and across programs statewide. The state Coordinating Board already used common learning outcomes to improve its Lower-Division Academic Course Guide Manual, which is the basis for common course numbering and credit transfer across institutions. In 2013, legislation reduced the number of completed semester credit hours needed to initiate the reverse transfer process.

**Establishment of a common core of general education courses for transfer**

During the grant period, Arizona, Indiana, Maryland, Montana, Ohio, and Tennessee each adopted a common core of general education courses for transfer at public colleges and universities in the state. In these states, full implementation was scheduled for the 2013-2014 school year.

**Regional campuses and hubs**

Montana was the only state to prioritize regional campuses as part of its grant work, but Arizona, Indiana, and Maryland also expanded their use of regional institutions.

- In Arizona, both the Getting AHEAD team and the Board of Regents identified the development of regional universities as a key strategy for increasing completions. Northern Arizona University and Arizona State University each opened one new regional campus during the grant period.

- Indiana made major efforts to expand the role of regional campuses by assigning them primary geographic responsibility for their local areas and clarifying their roles relative to the flagship campuses and to Ivy Tech campuses. The Lumina state grant also paid for a major study of Indiana regional campuses that received widespread national attention. The grant also supported further exploration of how a successful collaboration between Indiana University-East and the Richmond campus of Ivy Tech worked.

- In 2011, Maryland added a new Regional Higher Education Center, for a total of eight such centers statewide. Public or private institutions in Maryland and in some cases outside of Maryland can bid to offer courses at these centers, which serve areas underserved by existing higher education institutions.

- Montana’s grant funds were used in part to expand its system of two-year education such that each region of the state would be served by a two-year institution that could be a hub for education and workforce development. This work is still in progress.
Expanding the mission of two-year institutions

Montana focused its Lumina-funded efforts on redesigning its higher education delivery system to expand the roles of two-year technical colleges to provide broad lower-division general education courses and serve a role similar to that of comprehensive community colleges. As a first step, University System two-year institutions, along with two former College Programs,22 were renamed and re-branded. Work on expanding the institutions’ missions is ongoing.

Tuning and Fine Tuning

In Texas, outcomes for programs (Tuning) and for courses (Fine Tuning) in 12 different academic disciplines have been specified. Both Fine Tuning and Tuning are faculty-led processes of “harmonizing” programs and degrees by creating a framework that establishes common learning outcomes for students in lower-division courses in selected subject areas. These learning outcomes are then used to create voluntary articulation compacts statewide between two- and four-year institutions concerning: (1) the transfer to and application of credits from successfully completed Tuned courses to the major program of study at participating four-year institutions, and (2) the acceptance of students within a Tuned program at a four-year institution after they successfully complete the appropriate Tuned transfer curriculum at a two-year institution and satisfy all admission requirements. Lumina funded Tuning Texas as part of the state’s implementation grant. Tuning Texas continues to make progress, but its impact on transfer is unknown to date. As of December 2013, statewide articulation compacts for 12 degree programs were disseminated as voluntary memorandums of understanding. While the flagship institutions have not signed the agreements, the voluntary approach could set the stage for engaging all relevant universities in policy discussions around the larger issues of course design and delivery.23

Montana is undertaking a pilot Tuning initiative to align the coursework in associate and bachelor’s business programs at its two-year and four-year institutions. Common student outcome requirements will be developed at the course and program levels to facilitate student transfer.

Quicker completion

Electronic student advising and predictive analytics

Arizona redesigned its AZTransfer website to offer more tools and personalized information for students, partly with Lumina funds. After the redesign, students can: see which community college courses will transfer to the three public universities; see how exam scores may translate to college credit at various institutions; plan degree pathways; and track their progress on completing general education requirements. After one year, the improved site was generating 23% more traffic. Additional improvements are planned.

In Tennessee, Austin Peay University developed Degree Compass, an online advising tool that recommends courses and eventually majors for students, based on predictive analytics. Students who follow the recommendations have had positive results. Use is now being expanded to Volunteer State Community College, Nashville State Community College, and the University of Memphis. Degree Compass was recently sold to Desire2Learn, a for-profit company that intends to market the product beyond Tennessee.24
Prior-Learning Assessment

Prior-learning assessment offers ways for incoming students to earn college credits based on skills they have acquired through experience. These efforts are particularly beneficial for encouraging working adults to return to college and complete their degrees. Five states made progress with prior learning assessments.

- In 2013, Maryland passed the Veteran’s Full Employment Act, which requires the Higher Education Commission and public institutions to develop and implement statewide prior learning assessment guidelines for military veterans.

- In 2013, Montana passed legislation directing the Regents to develop criteria for prior learning assessment for veterans that could be implemented systemwide. The Regents revised University System transfer policies accordingly to provide military students and veterans the opportunity to demonstrate college-level learning for credit.

- Ohio’s state team shifted the focus of its grant to student completions, including through the expansion of prior learning assessments, after participating in the 2011 National Productivity Conference. The Board of Regents held a statewide prior learning symposium in 2013, where approximately 50 attendees volunteered to create a statewide network to advance the work. Beginning in 2014, the Board of Regents will also be working with the Council for Adult and Experiential Learning to explore options for scaling existing prior learning assessment practices statewide.

- In Tennessee, statewide standards are being developed to standardize prior learning assessments across institutions. These efforts are supported by a mixture of Lumina and Complete College America funding.

- Legislation in 2013 requires the Texas Workforce Commission, coordinating board, and public community and technical colleges to support competency-based programs aligned with regional workforce needs.

Competency-based credit

During the grant period, briefings and resources were provided to all state teams regarding promising new models, including Western Governors University and other online degree programs. Western Governors University offers degrees based on competencies rather than seat time or credit hours. Three states (Indiana, Tennessee, and Texas) partnered with WGU to offer competency-based, online degree programs through state affiliates called WGU Indiana, WGU Tennessee, and WGU Texas. So far, the numbers of students served in these three states have grown quickly but still represent a small proportion of each state’s overall higher education enrollments.

In 2013, Northern Arizona University launched its Personalized Learning program, a competency-based online degree program. The program is designed primarily for adults who have some college credits or work experience for which they may receive college credit. Students can progress through and complete degree programs at their own pace. Personalized Learning enables motivated students to earn a fully
accredited bachelor’s degree at a lower-cost, flat-rate “subscription” of $2,500 per six month period, and students can qualify for financial aid.

Under an EDUCAUSE Next Generation Learning Challenges grant, Texas A&M University - Commerce and South Texas College are using a modified Tuning Texas approach to develop a new low-cost bachelor’s degree in organizational leadership with an online competency-based component. This Bachelor of Applied Science degree, to be launched in spring 2014, was also developed to align with the Governor’s challenge for more affordable bachelor degrees.

Three-year degree pathways

The Ohio Legislature mandated that by 2014, 60% of academic programming and course sequencing be designed so that students have a pathway to a baccalaureate degree that can be completed in three years. Institutions have complied with the requirement, but some institutions—such as Ohio State University and Kent State University—are essentially requiring students who expect to graduate in three years to transfer in with 30 credit hours already completed.

Considerations about new models and reforms of existing models

Substantive efforts to improve existing models tend to require better student transitions and pathways between institutions and systems that have long been separate: K-12 school systems, community college systems, and comprehensive four-year colleges and universities. This new paradigm may also require administrative and academic units within institutions to communicate more effectively. Building bridges across these educational divides—through dual credit, course redesigns, or transfer policies and articulation agreements—requires a substantial infrastructure (academic, technological, and administrative); direct engagement by faculty and staff at multiple levels; and a wide variety of other resources, including implementation planning and capacity building. To help scale up activities associated with transfer, for example, some university systems and community colleges have designated high-level administrators to focus specifically on increasing transfers from two- to four-year institutions.

Some higher education leaders remarked about the long-standing challenges of this work at the state level, the difficulties of finding financial support, and the importance of Lumina’s funding of these efforts. Much of the work must be done program by program and institution by institution. It must be revisited periodically as academic content and instructional pedagogy evolves, yet it must be driven toward systemwide and statewide implementation. Higher education leaders indicated that creating and updating state information systems and technological infrastructure is important to identify barriers and track progress across systems.

Institutions seeking reforms of existing models generally need increased financial and human resources in the short term, in order to reach productivity gains in the long term. For instance, course redesign comes with upfront costs, and reverse transfer programs require faculty and staff time to work out transfer agreements and identify and track eligible students. State budget allocations to higher education often are not responsive to these requirements, resulting in slower progress unless institutions are able to find funds elsewhere. Given these realities, it is not clear where resources sufficient for substantial productivity gains will arise in the states, if those gains are to derive from expansion and spreading of reforms in student transitions and pathways.
Chapter 4
Step Four: Business Efficiencies

Business Practices that Produce Savings to Graduate More Students

In Lumina’s productivity work, business efficiencies have been described as featuring the systematic review of campus operations, academics, and athletics to reduce or eliminate lower-priority programs and services and to consolidate or outsource non-core programs and services. At the system level, this includes examining the mission creep of community colleges, four-year broad-access institutions, and four-year research universities to ensure that state needs are met in cost-effective ways. Most of the implementation grant and Strategy Labs activities in the states, however, focused on less ambitious goals, primarily around finding administrative efficiencies, including consolidating back-office operations and developing joint purchasing systems. Table 6 lists the policy changes related to business efficiencies identified in the seven states through December 2013.

Program and budgetary reviews: Limited effects so far

Indiana included program and budget reviews in its grant and Strategy Labs activities, and Tennessee saw this as an outcome of its implementation grant.

- At Indiana University East, academic departments undergo rigorous reviews; those that find efficiencies can retain and reinvest their savings. The practices at Indiana University East were documented through grant activities with the hope that they would be spread statewide. Aspects of the model have been adapted at other campuses but the full model has not yet been adopted elsewhere.

- In Tennessee, administrative and academic efficiencies were identified in the Higher Education Commission’s biannual review of institutional operating budgets; an original objective of the implementation grant was to reinvest savings to increase productivity.

Administrative efficiencies: Limited effects from the initiative

Ohio’s implementation grant, focused at the institutional level, supported expansion of an e-procurement consortium and exploration of shared services for IT and human services functions between two institutions.

Ohio, Maryland, Montana, and Texas are looking at statewide or systemwide efficiencies.

- In 2013, Ohio passed legislation requiring that institutional leaders benchmark progress on efficiency measures and report annually to the chancellor.

- The University System of Maryland’s effectiveness and efficiency initiative has been a national model since 2003. These efforts helped convince the Legislature to provide additional funding
that allowed the University System to minimize tuition increases. The implementation grant provided outreach and other activities to share this model, including with community colleges.

- Montana is working to develop an integrated information system for all state institutions to reduce duplication and centralize administrative services. As part of this effort, during the grant period two additional institutions joined the University System’s Banner software platform. Separately, the Board of Regents is pursuing a Smart Buildings Initiative to identify and implement energy savings. These efforts were not part of the state’s Lumina work.

- The Texas Higher Education Coordinating Board has produced several reports with recommendations for improving cost efficiencies. It is not clear whether action will be taken on the recommendations. Policy leaders in Texas have given mixed messages around higher education efficiency. For example, in recent years, Texas has moved to expand the number of high-profile research universities in the state. An independent report described this expansion as in conflict with the state’s efforts to provide a more efficient delivery of higher education.27 Also, the Coordinating Board’s core functions were streamlined and some of its authority to implement efficiency-related changes was limited by the Legislature in 2013.
Table 6.
Overview of Step Four: Policy Changes Identified Related to Business Efficiencies through December 2013

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<th>Key Support from Lumina</th>
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<tr>
<td><strong>AZ</strong></td>
<td>• Little or no history at state or systems level.</td>
<td>• Implementation grant did not include business efficiencies as a key goal, but in 2010, the Board of Regents incorporated business efficiencies in its strategic plan.</td>
<td>• Board of Regents 2010 Strategic Realignment Plan identified some specific goals for energy and cost containment, and specified that university presidents would report annually on these goals.</td>
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<td>• Some institutional changes implemented in response to dramatic state funding reductions.</td>
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<tr>
<td><strong>IN</strong></td>
<td>• Little or no history at state or systems level.</td>
<td>• Implementation grant supported a study of Indiana University East’s progress in departmental budgeting to expand it to other regional campuses.</td>
<td>• IU East operational efficiencies in student services and academic programs have been documented but have yet to be fully adopted at other regional campuses in Indiana or other states.</td>
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<td>• Substantial progress at Indiana University East in using departmental budgeting for business efficiencies.</td>
<td>• Strategy Labs resources were used to document and disseminate Indiana University East’s work to other states.</td>
<td>• The Indiana Commission of Higher Education’s 2012 strategic plan includes business efficiencies as an area of focus.</td>
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<td>• Lumina’s president publicly supported efficiency efforts.</td>
<td>• In 2013, the Commission worked with institutions to set targets for reducing cost per degree as well as other return-on-investment reporting.</td>
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<td>• Indiana state grant funded institution-specific and statewide reports on publicly funded university efficiency early in the grant period and found Indiana campuses to be relatively efficient.</td>
<td>• Indiana university system and campus administrative leaders reported continual attention to finding new ways to increase administrative and other efficiencies.</td>
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<td><strong>MD</strong></td>
<td>• Effectiveness and efficiency efforts at University System of Maryland have been a national model since 2003.</td>
<td>• Implementation grant funded exploration of joint funding of health insurance among Maryland Independent College and University Association, and helped fund two “completion summits” for community colleges to share efficiency approaches.</td>
<td>• Maryland Independent College and University Association is working to establish a group health insurance plan for its members.</td>
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<td>• The two completion summits (2010 and 2011) for community colleges were so well-received that the Legislature directed the Maryland Higher Education Commission to hold a similar event for all segments of higher education in 2013.</td>
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<tr>
<td>Status at start of grant</td>
<td>Key Support from Lumina</td>
<td>Status at end of 2013</td>
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<td><strong>MT</strong></td>
<td>• Little or no history at state or systems level, except for some joint purchasing of pharmaceuticals and health insurance for employees.</td>
<td>• Developments are unrelated to the Lumina grant. • The university system is developing an integrated information system for all state institutions, to reduce duplication and centralize administrative services. • Toward this end, two additional public institutions were brought onto the University System’s Banner software platform. • Separately, the Board of Regents is pursuing a Smart Buildings Initiative to identify and implement energy savings.</td>
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<td>• State team members participated in Strategy Labs convenings on quantitative and qualitative approaches to examining institutional performance.</td>
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<td><strong>OH</strong></td>
<td>• History of efficiencies in e-procurement and shared business services.</td>
<td>• E-procurement will continue beyond Lumina funding under the leadership of the Inter-University Council and Ohio University. • Lorain County Community College and University of Akron continue to explore moving the shared services work forward without Lumina funding, with some interest from other institutions. • A re-established statewide Efficiency Advisory Committee is obligated per 2013 legislation to report progress on efficiency benchmarks annually to the chancellor.</td>
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<td>• Implementation grant funds helped several institutions new to e-procurement with costs of implementation. • Grant funding of shared services supported feasibility studies of combining some IT functions and some human services functions across institutions. • In 2011, the University of Akron hosted a Strategy Labs site visit on shared services.</td>
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<td><strong>TN</strong></td>
<td>• History of common purchasing departments across systems.</td>
<td>• In 2010, as intended by the Complete College Tennessee Act, community colleges were brought under the Board of Regents as a single system, which has the potential to offer efficiencies. For example, the Board of Regents now hosts the information system for eight of the thirteen community colleges, with plans to bring in the remainder as soon as possible. • Joint purchasing has also increased among community college and nearby four-year institutions.</td>
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<tr>
<td></td>
<td>• Not a focus of implementation grant.</td>
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### Status at start of grant
- In 2009, the Governor directed the Higher Education Coordinating Board to review opportunities for cost efficiencies.
- The Legislature also directed the Coordinating Board to identify cost savings, including use of electronic textbooks.

### Key Support from Lumina
- Not a focus of implementation grant, but state team members participated in Strategy Labs briefings on business efficiencies.

### Status at end of 2013
- In 2010, Texas Higher Education Coordinating Board’s advisory committee produced recommendations to increase efficiencies.
- A 2012 report on progress in implementing the recommendations found that the top five actions that institutions had taken to achieve cost efficiencies were related to academic functions rather than administrative functions.
- Also in 2010, the Coordinating Board created the Council for Continuous Improvement and Innovation to plan for and develop a culture of continuous improvement in higher education.
- The Council for Continuous Improvement and Innovation reached the end of its tenure in January 2014.
- A new independent committee is being convened to continue work on the state’s strategic plan for higher education.
- It is not clear whether the Coordinating Board will continue to emphasize continuous improvement as a statewide strategy.
Considerations about business efficiencies

It is important to note that many of the new models and reforms described in Step Three seek to improve efficiencies and effectiveness of instructional programs, particularly course and program redesign, and common learning outcomes—and most states have ambitious goals in Step Three. Higher education leaders in two states noted that the greatest opportunity for cost savings in higher education is from academic rather than administrative efficiencies, given that instruction and related activities constitute the majority of most institutions’ overall budgets.

Higher education leaders in Texas came to a similar conclusion. According to a 2012 survey of institutional leaders by the Higher Education Coordinating Board, the top five actions institutions reported using to create cost efficiencies were related to academic functions: (1) consolidate degree programs that award too few degrees; (2) offer more online courses and hybrid courses; (3) increase class size; (4) use an online learning management system; and (5) develop articulation agreements.²⁸

Some higher education leaders suggested that greater efficiencies are likely to be achieved by focusing within institutions rather than across institutions. Working across institutions inevitably raises problems with technical compatibility as well as issues of trust and control. Sharing back-office functions, for instance, may require not only conversion to new software systems but also extensive negotiations regarding safeguards on the sharing of sensitive data. This may be less true for institutions within a single system. Montana and Tennessee are each working toward bringing all of their system institutions onto shared information systems.
Appendix I: Acknowledgements

SPEC Associates 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  
Darcy Renfro  
HCM Strategists’ advisor to the state  
Stephanie Jacobson  
GettingAHEAD’s Grant Coordinator

**Indiana:**
Derek Redelman and Teresa Lubbers  
Grant Team Co-Leads  
Jeff Stanley  
HCM Strategists’ advisor to the state  
Sarah Ancel  
Higher Education Commission’s liaison to the evaluation

**Maryland:**
Nancy Shapiro  
Grant Team Lead  
Greg Nichols  
HCM Strategists’ advisor to the state  
Erin Knepler and Jennifer Frank  
Grant Coordinators

**Montana:**
John Cech  
Grant Team Lead  
Judy Heiman  
HCM Strategists’ advisor to the state  
David Hall  
Grant Coordinator

**Ohio:**
Brett Visger  
Current Grant Team Lead  
Lana Oleen  
HCM Strategists’ advisor to the state  
Stephanie Davidson  
Grant Coordinator

**Tennessee:**
David Wright  
Grant Team Lead  
Nate Johnson  
HCM Strategists’ advisor to the state  
Jessica Gibson  
Grant Coordinator

**Texas:**
David Gardner  
Grant Team Lead  
Harrison Keller  
HCM Strategists’ advisor to the state  
Mary Smith  
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. 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.

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 overriding 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
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. 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 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


3 Major thematic findings and conceptual learnings from Lumina’s productivity initiative can be found in the companion report, *Improving the Yields in Higher Education: Findings from Lumina Foundation’s State-Based Efforts to Increase Productivity in U.S. Higher Education*, available at www.specassociates.org.


8 It is important to note that SPEC did not conduct interviews or surveys among rank-and-file faculty.


10 Tennessee has a peer-review quality assurance process apart from its performance-funding formula.


13 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.

14 As part of Strategy Labs Network activities, HCM Strategists reviewed the research on the impact of financial aid policies. This research indicates that financial aid is most effective in expanding opportunity when it is targeted to low-income students; it has little impact on retention for middle- or high-income students.

15 State teams in Texas and Maryland reported becoming interested in student incentives while attending the 2011 National Productivity Conference. Both teams received technical assistance and consultation on these issues from the Strategy Labs Network policy lead for Step Two.

16 More details about these incentives can be found in SPEC's full report for Indiana, Moving from State Policy to Implementation in Indiana: National Evaluation of Lumina Foundation's Productivity Initiative.


19 Payment structure information was provided to SPEC from the Indiana Commission for Higher Education.

20 Arizona’s implementation grant activities included a study of how many students were taking advantage of pathway programs; results were not available at the time this report was written.

21 Reverse transfers allow former community college students to apply course credits from four-year institutions back to their community colleges to earn an associate degree.

22 The two College Programs are Gallatin College Programs (now called Gallatin College) and Bitterroot College Programs (now Bitterroot College). Each of these are two-year programs whose campuses are under the purview of a four-year universities; both are taking on a full two-year institution mission under Montana’s comprehensive two-year college mission transformation work.

23 SPEC was told that some institutions interpreted the language of the October 2011 Memorandum of Understanding (MOU) regarding the voluntary course transfer agreements for Mechanical, Civil, Electrical, and Industrial Engineering to imply setting an admission standard. As a result, MOU wording was changed to clarify that by becoming a participant of one or more of the transfer compacts, an institution is not agreeing to give preferential admission to transfer students. The original MOU dated October 13, 2011, was formally revised in April 2012 to clear up this misunderstanding.

24 See http://www.desire2learn.com/products/degree-compass/.


