

Policy Changes and New Initiatives in Montana Higher Education



National Evaluation of Lumina Foundation's Productivity Initiative

July 2015



Produced by
SPEC Associates
Detroit, Michigan

**Policy Changes and New Initiatives
in Montana Higher Education:
National Evaluation of Lumina Foundation's Productivity Initiative**

This publication was produced by
SPEC Associates
with financial support from Lumina Foundation
(Grant # 7297).

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Executive Summary

Montana was one of seven states selected by Lumina Foundation in 2009 to launch a statewide initiative to increase productivity in higher education. This report summarizes Montana's achievements and its challenges in advancing productivity and increasing completions during the grant period.

Since 2008, SPEC Associates has been funded by Lumina to act as the third-party evaluator of this productivity work. The seven states participating in Lumina's productivity initiative were Arizona, Indiana, Maryland, Montana, Ohio, Tennessee, and Texas.

Montana adopted an array of interconnected public policies that are aligned with the productivity initiative and that promised to change the state's higher education system for years to come. Foremost among these policies was notable progress in the transformation of the Montana University System's colleges of technology and two-year college programs into more comprehensive community colleges. Seven transformed colleges, along with three existing community colleges now provide the full spectrum of services that make up the community college mission: university transfer, workforce development, developmental education, lifelong learning, and community development. In addition, the University System designated a two-year college or program in each region of the state to serve as a clearinghouse hub for postsecondary education and jobs training. These hubs deploy existing two-year campuses to improve adult access, high-school-to-college transitions, and workforce responsiveness.

The state also enacted a pilot version of performance funding that incentivized institutions to focus more on increasing student completion, adopted common numbering for all undergraduate courses, improved pathways for adult students, and expanded the role of the online Montana Digital Academy in delivering dual credit courses and college courses statewide. Even with this foundation, however, Montana leaders acknowledged that substantial work remains for the state to fully reach its newly adopted goal to increase the number of Montanans with degrees or certificates from 38% in 2008 to 60% by 2025.

The Development of Comprehensive Two-Year Colleges Is in Progress

Montana engaged a wide range of stakeholders in its efforts to rename, rebrand, and transform the former colleges of technology and two-year college programs.

These stakeholders included the Governor, legislators, higher education leaders, faculty, students, community members, civic leaders, and business leaders. The support of the commissioner of higher education and the two flagship university presidents was especially important, in their willingness to share resources and to legitimize the two-year colleges among the public.

Montana set an ambitious goal to increase the number of Montanans with degrees or certificates from 38% in 2008 to 60% by 2025.

Higher education leaders in Montana, identified several challenges, including:

- Insufficient funding to carry out the colleges' new strategic plans.
- Need for continuous updates to the strategic plans.
- Questions about accreditation and independence of the two-year colleges that remain embedded within four-year institutions.
- Public awareness and acceptance of a comprehensive two-year mission beyond vocational-technical education.

Marketing initiatives conducted during the grant period appeared to increase public interest in two-year education. The two-year campus mission expansion plans include future communications and marketing plans.

Other Efforts to Improve Student Experiences and Transitions

Montana also made progress in improving articulation and transfer policies. During the grant period, the University System approved a set of fully articulated, commonly numbered courses guaranteed to meet university general education requirements and to transfer for full credit statewide. All undergraduate courses—more than 10,000 courses across 60 disciplines—now have common course numbers and uniform course outcomes. This standardization expedites the review of transcripts and facilitates students' ability to determine which courses are applicable to the University System's transfer core.

In addition, the University System adopted task force recommendations spanning college readiness, placement and assessment, developmental education course redesign, student success and advising. The new policies are designed not only to improve high school-to-college transitions, but also to improve transitions from adult basic education and postsecondary institutions. A new law requires the development of prior learning assessments for veterans.

Montana's new Digital Academy may help to remove geographical barriers to higher education.

Montana also strengthened the role of dual enrollment in several ways. The state created the Montana Digital Academy as an online portal for dual enrollment and college courses offered statewide. The University System approved dual enrollment guidelines and a common application for dual enrollment statewide. It also set tuition for dual credit courses at 50% of the resident tuition charged by local two-year colleges and eliminated mandatory fees. The state Legislature approved \$1 million in 2013 to expand dual enrollment and workforce development at University System two-year institutions.

Montana did not have a history of performance funding to increase student completion prior to the state's involvement in the productivity initiative.

Performance Funding Gains a Foothold

With support from the Governor and the Legislature, Montana adopted a pilot performance-funding model for the academic year 2014-15 for the University System. In the first phase, the system will allocate \$7.5 million (5% of the total state appropriation) to campuses based on student retention and graduation. In the second phase

(for use after 2014-15), the model is expected to take institutional mission into account (for example, flagships, regional universities, and two-year colleges) and may include transfer rates, time to degree, enrollment and success in remedial education, credit accumulation, student retention rates, and course completion rates.

Some New Tuition and Financial Aid Strategies, but Affordability Remains a Challenge

Tuition at Montana University System's two-year institutions has been frozen for the last eight years, starting in 2007—providing a financial incentive for students to enroll at these institutions. The Board of Regents also froze tuition for six of the last eight years at comprehensive master's degree granting colleges and universities, and for four of the last eight years at the two flagship universities. Together these actions have resulted in a tuition differential between two-year and four-year institutions that is similar to that of comparable states.¹

Historically, Montana is a low-tuition, low-aid state. However, partly because wages are relatively low, average loan debt for students in Montana increased from \$21,125 in 2008 to \$24,000 in 2011. An issue not yet directly addressed is whether Montana will need to increase its need-based aid so that more low-income families can afford college.

Ongoing Leadership and Collaboration

Support and leadership of two Governors, two commissioners of higher education, and the Board of Regents, as well as an engaged higher education community helped Montana achieve its public policy goals for the productivity initiative. Further progress will require continued leadership and contributions from both public officials and higher education leaders, including stepped-up and strategic investment in higher education from the state. The prospects for Montana to sustain its progress are likely given the new direction of state policy, the state's new goals for increased educational attainment, and the strong support of higher education leaders to increase student success.

Several state leaders said that the productivity work built trust between higher education and the Legislature, as legislators became more informed about the productivity initiatives underway on campuses.

The state branded its productivity work as College!NOW and coordinated its efforts through a grant team composed of the deputy commissioner for two-year and community college education and

chief executive officers of all public two-year colleges and four-year campuses granting associate degrees. Advisors to the team included 30 representatives from the Montana University System Board of Regents, the Governor’s Office, the state Office of Economic Opportunity, the superintendent of public instruction, the Montana Hospital Association, the state Legislature, and the state’s tribal colleges.

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Introduction

Since 2008, Lumina Foundation has invested in Montana’s efforts to increase the number of residents who have high-quality postsecondary degrees and certificates. Lumina’s investment was part of a multistate initiative that focused on improving productivity in higher education by supporting statewide and systemwide efforts to enroll and graduate more students, without increasing the cost per degree.

Montana was one of eleven states to receive a learning year grant from Lumina in 2008. Montana was also one of seven states selected for a four-year implementation grant in 2009. During the grant period, Lumina developed and refined its productivity agenda called “Four Steps to Finishing First in Higher Education” and asked the states to develop strategies aligned with four areas:²

Seven states received implementation grants:
Arizona, Indiana, Maryland, Montana, Ohio, Tennessee, and Texas

- 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.

The goal of Montana’s productivity work, branded as College!NOW, was to increase educational attainment in the state by increasing enrollments, transfers, completions and efficiency at the two-year college level. The strategies for achieving this goal were to:

- 1. Promote the community college mission to improve access, especially for targeted populations, in all two-year colleges in the state;
- 2. Deploy Montana’s two-year colleges as regional hubs for adult access, high school-to-college transitions, and workforce responsiveness;
- 3. Coordinate curriculum and technology to expand access, promote readiness and completion, and improve efficiencies; and

"Respondents" and "interviewees" in this report include state policymakers and their staff, higher education administrators and faculty, business representatives, national experts, and others.

Strategy Labs Network Resources Available to States

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

HCM Strategists: National intermediary for the productivity policy work; managed the advisors in the seven states; provided policy experts, technical assistance, report writing; and organized cross-state convenings.

Public Agenda: National intermediary for engaging college and university leaders, faculty, and staff in efforts to increase productivity. Provided research, stakeholder engagement and capacity-building assistance to elevate the voices of students, faculty, employers and institutional practitioners to support states' progress.

SPEC Associates: National evaluation firm, providing real-time insights used to develop and manage the work across states.

National Governors Association Center for Best Practices: Advised the intermediaries and developed a set of high-level metrics for policymakers to evaluate the return on public investments in higher education.

Institute for the Study of Knowledge Management in Education: Provided workshops for change and hosted the online Knowledge Collaborative to facilitate information sharing and peer learning.

Catalytica: Facilitated the use of video-based stories for individual, organizational, and community transformation.

4. Develop performance-based funding strategies.

Partially as a result of its partnership with Lumina, Montana also set an ambitious goal to increase the number of Montanans with degrees or certificates from 38% in 2008 to 60% in 2025. In 2011, Montana re-scoped its work plan, slightly modified the original strategies, and added a fifth strategy: "Through effective communication, constituent groups are aware, informed, and engaged with two-year college education."

College!NOW was coordinated by a grant team composed of the chief executive officers of all public two-year colleges and four-year campuses granting associate degrees. Advisors to the team included 30 representatives from the Montana University System Board of Regents, the Governor's Office, the state Office of Economic Opportunity, the superintendent of public instruction, the Montana Hospital Association, the state Legislature, and the state's tribal colleges. Two leadership positions were funded by the grant: a coordinator for the work and a deputy commissioner for two-year and community college education. Lumina grant funds also supported a state evaluator. The grant included funding for the creation of a full-time "Two-Year College Mission Integration Director." This position was integral in supporting mission expansion of the two-year colleges as well as the grant's reach to engage

more adult learners and promote prior learning assessment, competency-based education, dual enrollment, developmental education reform, and tuning efforts.

Besides the Lumina grant, Montana received access to resources associated with the initiative, including participation in a Strategy Labs Network. The Strategy Labs Network is Lumina's method for delivering technical assistance, engagement opportunities, and support to state policymakers and higher education system leaders. The Strategy Labs Network's goal is to catalyze policy action in the Four Steps. Montana's leaders participated in telephone, online, and face-to-face meetings in the state and nationally. Examples of Montana's Strategy Labs Network engagement include: participating in site visits to learn about Maryland's course redesign efforts, service blueprinting, outcomes-based funding in relation to student incentives and tuition policies, and City University of New York's New Community College; attending a webinar about Indiana's transfer websites; obtaining Strategy Labs reports about performance funding and targeting student aid; and participation of the Western Interstate Consortium on Higher Education president and the state advisor in a Board of Regents strategic planning retreat.

In 2008, Lumina asked SPEC Associates (SPEC) to evaluate its investments in Montana and the other states participating in the initiative. Data collection for this evaluation ended in December 2013. This document is a report of SPEC's analyses and findings regarding Montana's achievements. SPEC also examined factors that appeared to contribute to and/or challenge this work. The first section of this report highlights the state's activities and outcomes within the Four Steps to Finishing First. The second section captures SPEC's insights about the state's experiences across the Four Steps and identifies remaining challenges and opportunities facing Montana's productivity work that extends beyond the scope of Lumina's current investments in the state. The individuals and organizations that contributed to this evaluation are listed in Appendix I. Appendix II describes the evaluation methodology. SPEC's evaluation reports from the other six states as well as cross-state evaluation reports can be found at www.specassociates.org.

Any conclusions in this report are those of SPEC Associates and are not meant to represent the opinions of any other individual or organization affiliated with this evaluation.



Four Steps to Finishing First

I. Montana's Achievements

This section examines Montana's activities and achievements related to the Four Steps to Finishing First, particularly in the area of state and system-level program and policy change. Montana's work in engaging stakeholders and supporting champions to support program and policy change are also highlighted, both of which were Strategy Labs Network strategies.

Tables 1, 2, and 3 summarize the support Lumina provided to Montana, the value that Lumina added to the state's efforts, and the state's accomplishments related to the Four Steps. SPEC recognizes that Lumina's investments were one of many factors that contributed to Montana's achievements in higher education productivity in recent years. In general, however, participants in the state described Lumina's contributions as significant in helping Montana achieve its outcomes. A more detailed analysis can be found in SPEC's 2012 report, *National Evaluation of Lumina Foundation's Productivity Work: Interim Report for Montana*.³

Table 1: Lumina's Support for Montana's Productivity Work

A planning grant in 2008 to conduct a policy audit and create an implementation plan for improving higher education productivity

A four-year implementation grant starting in 2009 funding:

- College!NOW, a collaboration of higher education leaders who worked to establish new statewide vision, mission, and names for the Montana University System two-year institutions
- Engagement with the College Brain Trust, consultants who helped two-year institutions develop their strategic plans for implementing new missions
- Storytelling consultation to help consider ways to communicate the impact that expanded access could have on Montana's residents
- Engagement with Strategies 360, consultants who helped Montana develop communication strategies related to the renaming and rebranding efforts
- The position of deputy commissioner for two-year and community college education for the Office of the Commissioner of Higher Education, who led the grant efforts

Table 1: Lumina's Support for Montana's Productivity Work (continued)

- Public Agenda's assistance with institutional and student engagement of two-year colleges related to mission expansion and rebranding, capacity-building for higher education leadership around faculty engagement, and institutional engagement with performance-based funding.

Support for the HCM Strategists advisor as liaison between Lumina, College!NOW, and the Office of the Commissioner of Higher Education as lead agency for the grant

A web-based online community to facilitate knowledge sharing and collaboration

Participation of state higher education leaders and policymakers in national higher education productivity convenings and Strategy Labs Network site visits

A visit by Lumina's Productivity Initiative director in 2012 to meet with higher education leaders and policymakers about the importance of higher education productivity policies

Table 2: Lumina's Value-Add

Lumina's resources energized and catalyzed the state's two-year college initiative.

"Without (the Lumina grant) as a **catalyst** it would've been much more difficult to move the agenda forward with respect to two-year education."

Lumina provided flexible funding and required accountability that helped get the job done.

"Lumina funds provide **flexibility** that you can't get with state funds...having resources that allow more creativity and flexibility and the ability to really move your vision...they're a gift for change."

"When you work within the state system it's really helpful to have someone from the outside that also sets that **big picture benchmark** for how many graduates we need."

Lumina funding required collaboration and a systems perspective that resulted in new efforts to improve productivity.

"We had an ABE Dev Ed best practice conference ... I think that was incredibly significant because it was the first time ABE and Dev Ed ever really met together...seeing how we can work together ... how do we **collaborate** to better service students quickly and efficiently toward credentialing."

The Lumina grant seeded opportunities for other funding.

"I don't think, as a state, we would have been in a position to pursue [Complete College America; USDOL TAACCCT] without the support ... we had with Lumina over the past four years ... in many ways [Lumina] kind of helped **push us a little bit** which I think as a system, as a state, we needed."

Note: Lumina's value-added is based on interviews with state and higher education leaders.

Table 3: Montana’s Achievements under Four Steps for Finishing First

Step 1: Montana adopted a short-term performance-funding model based on completions and retention. The state is engaging in discussions to develop a complete long-range performance-funding component focused on additional student outcomes.

Step 2: Montana worked toward access to affordable, flexible, and comprehensive two-year education programs statewide, and communicated two-year options to students. Financial incentives were created for students to consider two-year institutions by freezing tuition at Montana University System two-year institutions for the last eight years, starting in 2007.

Step 3: Montana purposefully differentiated the missions of two- and four-year institutions, extended the comprehensive two-year education mission to all Montana University System colleges of technology and two-year college programs, and approved new names for the colleges reflecting their new visions and missions. Montana University System identified a two-year college or program in each region of the state to serve as a “clearinghouse hub” for post-secondary education and jobs training. These hubs were seen as a way to deploy existing two-year campuses to serve each of the state’s regions. Montana also reduced tuition and fees for dual credit courses. The University System investigated and employed new instructional models, including online education through the Montana Digital Academy and credit for prior learning, and established full certificate and two-year degree programs in Bozeman and Hamilton. It is mid-way through its work on two-year to four-year degree Tuning for business programs.

Step 4: The University System is working to align business practices and standardization of software codes throughout its information system, and to integrate those systems to enable efficiencies and seamless student enrollment across its campuses.

Note: Other funders and initiatives also contributed to the accomplishments Montana made in higher education productivity.



Performance Funding

Montana adopted a short-term performance-funding model based on completions and retention. The state is engaged in discussions to develop a complete long-range performance-funding component focused on additional student outcomes.

History: Montana’s higher education funding was enrollment-based

Montana has traditionally funded higher education based primarily on resident full-time-equivalent student enrollments. The Montana University System receives legislative appropriations as a lump sum and allocates resources to campuses according to formulas.⁴ Montana’s productivity grant included developing strategies for integrating performance-based elements in the state’s higher education funding model.

Findings: Engaging stakeholders to move performance funding forward

KNOWLEDGE AND ENGAGEMENT OF STAKEHOLDERS

During the grant period, the state team engaged a wide range of stakeholders in the development of a performance-funding model for higher education, including institutional leaders, faculty, business and community leaders, legislators, and the Governor. These activities featured the following:

Montana engaged a wide range of stakeholders to develop its performance-funding model.

- 2009, 2010** A Montana University System Board of Regents-appointed workgroup considered performance funding and recommended a model that would: (a) align targeted outcomes with institutional type; (b) associate achievement in key performance areas with respect to funding; and (c) define, measure, and reward success by institution.⁵
- 2010, 2011** The president of the National Center for Higher Education Management Systems worked with the grant team and highlighted performance-funding options to the Board of Regents.⁶
- 2011** At Lumina’s National Productivity Conference, Montana leaders participated in a discussion led by HCM Strategists about performance-funding models in other states. Later that year, state leaders attended a Strategy Labs site visit on Tennessee’s performance-funding model.



2011, 2012

Interviewees said that turnover among Regents resulted in a slowdown of work on performance funding. By fall 2012, the work was revived as interest among the Regents renewed. The president of the Western Interstate Commission on Higher Education and Montana's state advisor from HCM Strategists led a discussion of performance-funding models during a Regents retreat.

2013

Public Agenda conducted focus groups with nearly 100 faculty, staff, administrators, and institutional leaders. Three students also participated. The sessions were intended to engage institutional stakeholders from the beginning of the longer-term performance-funding planning process and to learn more about initial attitudes toward performance funding.⁷ In addition, the Regents created a Performance Funding Steering Committee comprised of faculty and other representatives from each campus.⁸ Public Agenda solicited an open call for feedback and focus groups with faculty, staff, and administrators as well as over 1,000 participants across University System campuses on behalf of the Office of the Commissioner of Higher Education and the Performance Funding Steering Committee. The goal of this project was to engage institutional actors in planning for the implementation of performance funding.

ACTIVE CHAMPIONING

Interviewees said that the Higher Education Commissioner Clayton Christian met frequently with former Governor Brian Schweitzer and sitting Governor Steve Bullock, members of their staff, Board of Regents members, legislators, and campus officials (including faculty) to discuss opportunities for performance funding. In mid-2013, Commissioner Christian's work with the Governor, the chairman of the Joint Appropriations Subcommittee on Education, and the Board of Regents helped to bring about state policies to establish performance measures, as reported under "Policy action" below. Regent Todd Buchanan of Billings expressed support for performance funding and called it an exciting development.⁹

Others also helped to champion the development of performance funding. In March 2013, an editorial in the *Missoulian*, a major Montana newspaper, expressed support for the idea of performance funding.¹⁰ The associate commissioner for planning and analysis at the Office of the Commissioner of Higher Education emphasized the importance of drawing from existing practices and engaging faculty: "We will use nationally recognized best practices; there is a wealth of information out there. This process has to be inclusive."¹¹

POLICY ACTION

In 2013, the Governor, commissioner, and chairman of the Joint Appropriations Subcommittee on Education signed an agreement that over the next biennium, the state would provide level funding for the University System's core operations if the University System would freeze tuition and establish performance measures in fiscal year 2013-14, and agree to implement the measures in academic year 2014-15.¹² The agreement was formalized through a budget addendum. With support from the Governor and the Legislature, the University System also committed to allocating \$7.5M -- or 5% of the state appropriation--to campuses based on progress made toward increasing college completions and other related outcomes, e.g. student retention.

During 2014, OCHE staff members will work with the Performance Funding Steering Committee and other campus leaders to identify performance-funding measures for use by the state after the 2014-2015 academic year. These longer-term measures are expected to account for institutional mission, for example, flagships, regional universities, and two-year colleges, and may include metrics for graduation rates, transfer rates, time to degree, enrollment and success in remedial education, credit accumulation, student retention rates, and course completion rates.¹³ At the time data collection for this evaluation ended, the Performance Funding Steering Committee was expected to present its recommended measures for the longer-term performance-funding formulas to the Regents in May 2014.



Analysis: Participation with Lumina encouraged Montana to take action on performance funding

Pursuing performance funding for higher education is challenging. Not only is it time consuming, it also requires the commitment of a wide range of stakeholders. It can be difficult to “sell” to institutions that are accustomed to receiving funding based on enrollment. Respondents reported that Montana had discussed performance funding for years, but had not yet taken action. This time, the stage was set for progress by strong interest and support by Regents, the Governor, and some legislators. Institutional leaders said that the national conversation concerning performance funding also produced momentum.

Through its participation with Lumina's productivity initiative, the state team accessed information that it then shared to move the conversation forward. Key examples include the team's participation in the National Productivity Conferences and Strategy Labs Network site visits in 2010 and 2011, the presentation to the Regents by the president of the Western Interstate Commission on Higher Education and the state advisor from HCM Strategists in 2012, and Public Agenda's focus groups with institutional stakeholders in

2013. Ultimately, respondents credited Commissioner Christian's leadership with moving the work forward.

Two missed opportunities may have impeded progress. Respondents said that the state could have developed its models further if it had begun its work earlier—yet turnover among the Regents in 2011 and 2012 may still have played a role in delaying progress. Respondents also indicated that faculty were not engaged effectively early in the process. One early presentation to faculty, for instance, was poorly received because it focused on metrics rather than on providing a larger overview of performance funding and its potential benefits. Several respondents noted that Public Agenda's focus groups with institutional stakeholders in 2013 started to make up some lost ground. The focus group discussions identified concerns such as the lack of definitive evidence that performance funding is effective, the dangers of unintended consequences, and whether formulas would adequately address differences in institutional mission.¹⁴

The short-term model focuses on retention and completion while the longer-term model is expected to take into account a broader array of measures, including institutional mission. Some respondents indicated support for such measures that benchmark institutions to their own previous performance rather than to each other. Some also suggested that metrics be established to provide incentives for institutions to implement new models for student success, such as in developmental education and transfers across institutions. A higher education leader expressed the hope that the state will be flexible in adapting its model over time.

Montana's prospects for performance funding are promising, for several reasons. First, the Office of the Commissioner of Higher Education and the Board of Regents have established processes for the development of longer-term policy beyond the first pilot. Second, the approach to performance funding appears to have become more nuanced based on its engagement of higher education stakeholders. For example, the state began to refer to performance funding as "outcomes-based funding," which one respondent noted is more tolerable for campuses.



Student Incentives

Montana worked toward access to affordable, flexible, and comprehensive two-year education programs statewide, and communicated two-year options to students. Financial incentives were created for students to consider two-year institutions by freezing tuition at Montana University System two-year institutions for the last eight years, starting in 2007.

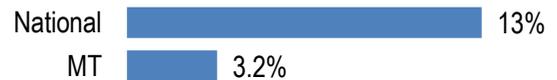
STATE AND SYSTEM-LEVEL STUDENT FINANCIAL AID POLICIES

History: Past and current record of low financial aid to students

Developing new approaches to financial aid and other student incentives to increase student completion was not a focus of Montana’s grant. Historically, the state’s investment in need-based financial aid has been low compared with top-performing states. As a percentage of higher education appropriations for state student aid appropriations, Montana lags at 3.2% compared with the average state appropriation of 13%.¹⁵ The state does not have incentive-based aid policies to promote student completion at the state or system level.¹⁶

Montana historically has been a “low-tuition” state with a corresponding low investment in state need-based aid. This could be changing.

Montana vs. National Average:
% of higher education appropriations for state student aid appropriations



Findings: No action on increasing need-based financial aid

Several recommendations for increasing state financial aid were made during the grant period, but none resulted in action by the Legislature.

- ↓

2009-10 The University System’s strategic plan was revised in 2009-10 to include a goal to increase the amount of need-based student financial aid.

2012 The Regents’ standing Affordability Task Force recommended an increase in need-based aid. The Regents’ Veterans Workgroup recommended the creation of a state need-based aid program for veterans.

2013 The Regents proposed an increase in need-based aid of \$500,000 for the next biennium. Funding for need-based aid has remained at \$4.5 million since 2007. The Legislature did not act on this proposal.

Analysis: Allocations might increase if state had a plan with metrics showing impact of aid on low-income students

Based on the Regents' recommendations to the Legislature and the comments of respondents, the Board of Regents appears to view state need-based aid as an important tool for making higher education more affordable. So far, however, the Regents' efforts to increase state funding for need-based aid have been unsuccessful and have not received substantial public attention.

"When we can go to the Legislature and be specific and have specific goals and metrics, we can make a case regardless of the politics or in addition to the politics and I think that will succeed."

Higher education leader

One barrier to increasing need-based aid noted by respondents is that the "pioneer culture" of Montana emphasizes individualism and self-sufficiency. Interviewees suggested that the best strategy for increasing state aid would be to develop a specific plan with clear metrics for how it would impact specific populations of students, since legislators are driven by accountability and results. One higher education leader stated, "When we can go to the Legislature and be specific and have specific goals and metrics, we can make a case regardless of the politics or in addition to the politics and

I think that will succeed." Another higher education leader suggested that key metrics for need-based aid involve its impact on completion rates for low-income students:

"There is a strong socioeconomic determinant for students not having the merit that some of our scholarships require. . . There is an opportunity for us in Montana to break that vicious cycle and embrace need-based aid and when you do that, then, what you find is that that student that we thought that was not college-ready or was underprepared, well, now we call him a late bloomer."

This strategy to develop a plan with clear metrics for how need-based would impact student access and completion aligns well with the Legislature's new focus on performance measures.

STATE AND SYSTEM-LEVEL TUITION POLICIES

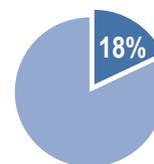


History: Montana is traditionally a low tuition state but cost is prohibitive for low-income students

Tuition incentives or freezes were not a focus of Montana's Lumina-issued grant. Since 2007, however, the Board of Regents has frozen tuition at 2006 levels at the University System's two-year institutions.

Montana has traditionally been identified as a low tuition state, however tuition and fees at Montana's two-year colleges are close to the regional average. Because wages are also relatively low, the share of family income needed to pay for college is high for many families. At community colleges, for example cost of attendance in 2009 represented 18% of median family income for those in the lowest income quartile. For Montana's public four-year colleges and universities, nearly one-third of their income would be needed to pay for the cost of attendance.¹⁷

Cost of attendance as % of median family income (lowest income quartile, 2009)



Findings: Tuition freezes for two-year and some four-year colleges

ACTIVE CHAMPIONING

Many legislative leaders in Montana support tuition freezes at the University System's two-year colleges and smaller four-year campuses. In his 2013 state-of-the-state address, Governor Bullock asked legislators to join him and Commissioner Christian in working to freeze tuition across the University System. In a subsequent update to its strategic plan the Board of Regents included an objective to decrease tuition as a percentage of median household income—thereby recognizing a policy link between tuition rates and income levels.

POLICY ACTION

The Board of Regents froze tuition at the University System's two-year campuses for the last eight years, starting in 2007. The Regents also froze tuition for six of the last eight years at campuses that were comprehensive master's degree granting colleges and universities and four of the last eight years at the two flagship universities.

Analysis: Tuition freezes help, but may not be sustainable

As with financial aid, higher education leaders in Montana view affordable tuition as a tool for increasing enrollment and completion. During the grant period, the Regents sought to further differentiate tuition rates at the two-year colleges versus the four-year institutions. SPEC was told that in the last several years tuition at the two-year colleges was reduced from being 68% to 50% of the four-year rate. This change accompanied efforts to invigorate two-year colleges and brought Montana's tuition rate differential in line with comparable states.

SPEC was told that the tuition freezes would not have been possible without the cooperation of the Governor and Legislature, particularly in providing additional funds in 2007 and 2013 to keep tuition affordable. It is unclear how much longer the Regents will be able to maintain the freezes without state funding increases in the future. Institutions face annual increases in fixed costs over which they have little or no control, such as utility rates,

insurance payments, and other expenses. Tuition freezes, while helpful to students in the short run, also can limit the ability of institutions to pay the increasing costs of core institutional operations while attempting to maintain quality academic programs.



New Models

Montana purposefully differentiated the missions of two- and four-year institutions, extended the comprehensive two-year education mission to all Montana University System colleges of technology and two-year college programs, and approved new names for the colleges reflecting their new visions and missions. Montana University System identified a two-year college or program in each region of the state to serve as a “clearinghouse hub” for post-secondary education and jobs training. These hubs were seen as a way to deploy existing two-year campuses to serve each of the state’s regions. Montana also reduced tuition and fees for dual credit courses. The University System investigated and employed new instructional models, including online education through the Montana Digital Academy and credit for prior learning, and established full certificate and two-year degree programs in Bozeman and Hamilton. It is mid-way through its work on two-year to four-year degree Tuning for business programs.

SYSTEM-LEVEL AND INSTITUTIONAL POLICIES FOR ACCELERATION AND COMPLETION

History: Montana’s two-year colleges were not organized as a system

Montana did not set out to develop a statewide system of two-year colleges as a starting point for further postsecondary education or training. Three local communities started their own community colleges. At the statewide level, the University System’s two-year colleges of technology historically had limited mission, role, and scope and were structurally connected to school districts. Student transfer to public four-year institutions was not an overarching goal for either public community colleges or colleges of technology.

At the beginning of the grant period (2009), the University System operated five colleges of technology, two of which were stand-alone institutions and three of which were embedded within four-year universities. In addition, the Bozeman area was served by a branch campus of the MSU Great Falls College of Technology in Bozeman. Each of the colleges of technology was affiliated with and under the administrative responsibility of a four-year university. Montana was also home to seven sovereign tribal colleges.

The former colleges of technology and two-year programs fall under the governance structure of the Board of Regents. The three community colleges, while locally governed, are supervised by the Board of Regents which is responsible for approving their respective curriculum, setting faculty qualifications and academic policy, and approving the community college budgets.

Montana’s productivity grant included the following strategies for system-level and institutional redesign:

1. Develop and approve a comprehensive two-year education mission.

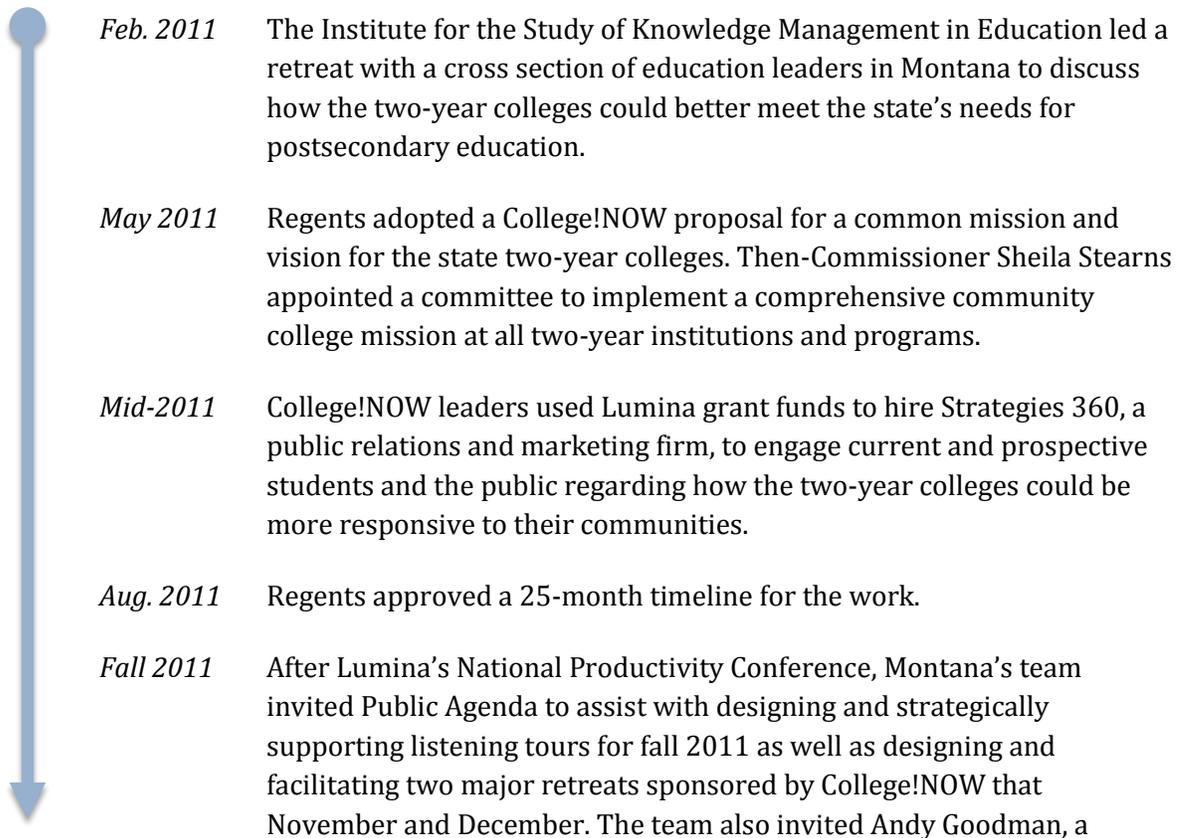
2. Expand the comprehensive two-year education mission so that it is available through every state two-year college by 2013.
3. Serve every Montana region with a two-year college program as its regional hub for education and workforce development.
4. Enhance Montana’s two-year education through coordinated curricula and integrated technology.
5. Inform constituent groups about Montana’s two-year college education.

These strategies became the primary focus of Montana’s grant work—particularly extending the comprehensive mission to the former colleges of technology and two-year programs as well as renaming and rebranding, the institutions.

Findings: Two-year college education in Montana is being transformed

KNOWLEDGE AND ENGAGEMENT OF STAKEHOLDERS AND POLICYMAKERS

The five colleges of technology, the two satellite college programs, the three public community colleges, and the seven tribal colleges were invited to join a consortium of two-year colleges to help transform the system of two-year college education in Montana. In service of this work, Montana made extensive use of Lumina’s Strategy Labs Network and technical assistance resources. Several key events were important to Montana’s work in re-visioning and rebranding its two-year institutions.



conference speaker, to lead discussions about how to use storytelling to promote the state’s vision for two-year colleges.



<i>Jan. 2012</i>	The colleges of technology submitted draft comprehensive two-year mission plans to the Board of Regents. College!NOW brought in the College Brain Trust to work with campus deans and others to develop consistency across plans, identify metrics for achievement, establish target dates for task completion, and estimate the resources needed to implement the plans. Also in 2012, Strategies 360 assisted the campuses with the implementation of their new names, logos, and brands. Each of the campuses worked with their students, faculty, staff, and respective communities to identify and select new institutional logos.
<i>Jan. & Mar. 2012</i>	Then-Commissioner Stearns and Deputy Commissioner John Cech made presentations to the joint legislative Education and Local Government Committee regarding Montana’s two-year initiative.
<i>Mar. 2012</i>	The Board of Regents adopted a framework for renaming the colleges of technology to reflect the institutions’ location, mission, and university affiliation.
<i>May 2012</i>	The Board approved new names for each of the colleges of technology as well as the two former college programs.
<i>2012</i>	Deputy Commissioner Cech made 18 trips within the state to the colleges of technology and the two-year programs in Bozeman and Hamilton to engage faculty, staff, students, community leaders, and the media regarding efforts to transform the two-year colleges. ¹⁸
<i>Jan. 2013</i>	The College Brain Trust presented its final report to the Regents. Grant team members reported that the group’s work had been “instrumental” in engaging campus administrators, faculty, and staff.
<i>Mar. 2013</i>	At a Regents meeting, the vice president of Complete College America outlined recommendations to help Montana increase completion rates. ¹⁹
<i>May-Nov 2013</i>	College!NOW piloted a new grant-funded community outreach initiative at City College which was specifically designed to reach out to the adult populations. Strategies 360 conducted a public information campaign using social media, video, and billboards.

The vocal support of key leaders throughout the grant period was critical to Montana's two-year education initiative.

ACTIVE CHAMPIONING

The support of the former and current Governors, the former and current commissioner of higher education, and the deputy commissioner for two-year and community college education were mentioned as pivotal to the two-year initiative. In addition, the Regents and the institutional

presidents that were appointed midway through the grant period continued to implement their predecessors' vision for two-year college transformation.

Analysis: Lumina resources and the inclusion of higher education leaders were the keys to Montana's success

Throughout the grant period, the commissioner of higher education, the deputy commissioner for two-year and community college education, other OCHE staff, and Strategies 360 engaged a wide range of key stakeholders in directed conversations about extending the mission of the former colleges of technology and two-year programs as well as the rebranding and renaming the state's colleges of technology and two college programs. These stakeholders included the Governor, legislators, higher education leaders, faculty, students, community members, civic leaders, and business leaders, all of whom worked toward transforming the former colleges of technology and college programs into comprehensive two-year colleges. The support of the two flagship university presidents was especially important, both in their willingness to share resources and to legitimize the two-year colleges among the public.

SPEC's interviews identified several factors that were important to the rebranding efforts. Montana had begun to develop ideas for transforming its two-year colleges prior to the Lumina grant, and these intentions dovetailed well with Lumina's productivity agenda. The Office of the Commissioner of Higher Education and the Regents invested in and prioritized two-year education, including creating a new position of deputy commissioner for two-year and community college education. The current deputy commissioner, John Cech, who has held that position for the past several years, was broadly praised by respondents as providing leadership throughout the process, working well with all stakeholders, and using Lumina resources strategically.

A second major factor in accomplishing this work, according to respondents, was the state's engagement with Lumina's productivity initiative. In particular, the grant provided the state with information, resources, and momentum to advance its plan. Interviewees noted the importance of the technical support provided to the grant team and to other state leaders. One respondent said,

“After these years of the Lumina funding and all of the consultants, we really got an education. . . The money was spent on helping all of us learn what’s important around, who’s doing what, what’s on the cutting edge. . . We did a lot of learning during that whole process.”

Interviewees described Public Agenda’s facilitation of discussions among institutional leaders as “critical” and noted the work of Strategies 360, the College Brain Trust, and the state evaluator in providing crucial feedback to the College!NOW team and thereby enabling the work to stay on track.

Respondents said that the renaming and rebranding of Montana’s two-year colleges is a major step forward in elevating the role of two-year education in the state, and an accomplishment to be celebrated. They emphasized that the next steps are to continue the rebranding work and implement the campuses’ new strategic plans to meet their expanded missions.

Respondents identified several key challenges that the higher education community will need to work through as the rebranding and mission expansion continue. The first is the question of funding. Representatives from both Public Agenda and the College Brain Trust informed the Regents that the two-year colleges would need additional funding to carry out their new strategic plans. Insufficient resources will likely slow the pace of implementation, and there is still a long way to go before all of the newly renamed two-year institutions can offer a full spectrum of academic programs. Delays in fully realizing the new missions could lead to disillusionment among state residents who attempt to pursue degrees and certificates only to find limited program options at their local institutions.

A second set of challenges involves accreditation. The two-year colleges that are embedded within four-year institutions are not separately accredited. One result is that they work through their affiliated institution’s curriculum committees and faculty senates to make academic decisions. This structure could cause friction for a variety of reasons, including concerns about shifts in enrollment from the four-year to the two-year programs. In addition, some four-year institutions may lack experience in offering the kinds of workforce education and certificate and degree programs that the embedded two-year colleges hope to offer.

A final set of issues involves public awareness and acceptance of two-year education as valuable. Marketing initiatives conducted by Strategies 360 appeared to increase public interest in two-year education opportunities. Some interview respondents, however, had mixed opinions about the extent to which state residents embraced the new community colleges as comprehensive education institutions. For more information about this issue, see “Broader questions and opportunities in Montana: Changes in state perception and culture”(page 37).

Montana’s steps forward in addressing these challenges will determine how quickly and how completely the state’s former colleges of technology and college programs are able to transform into comprehensive two-year colleges.

STATE AND SYSTEM-LEVEL POLICIES FOR IMPROVED ARTICULATION AND TRANSFER (PORTABILITY OF LEARNING/CREDITS)

History: Major efforts to improve transfer began in 2007

The University System took a step toward improved transfer opportunities in 2007, when the Regents received a \$1.5 million state appropriation to begin developing a common

What is “Tuning”?

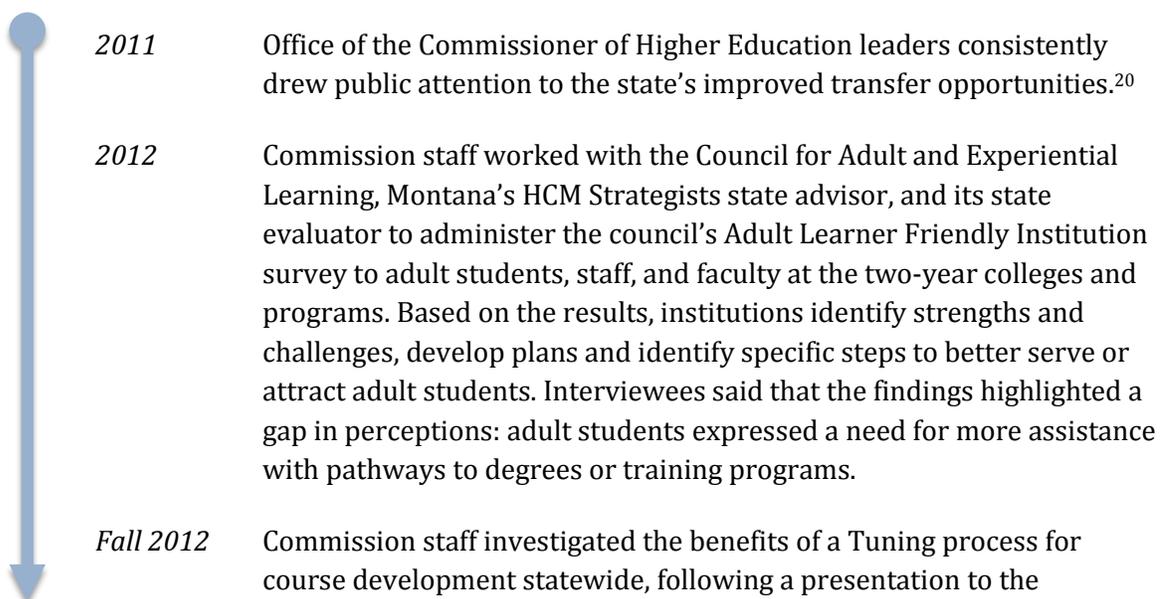
Tuning is a faculty-driven process to articulate what a student knows and is able to do in a given discipline at the point of degree. Typically, faculty from four-year and two-year colleges and universities within a state meet by discipline to work through the Tuning process. (see http://tuningusa.org/About/What_is_Tuning.aspx)

course numbering system and a centralized data warehouse for public institutions. During the grant period, Montana’s work to improve articulation and transfer focused primarily on investigating how to make the University System more adult-friendly, how to align two-year and four-year business programs more effectively through a “Tuning” process (see “What is Tuning?”), and how to align adult basic education programs with higher education options to better meet the needs of state residents.

Findings: A focus on uniform course outcomes and making higher education more adult-friendly

KNOWLEDGE AND ENGAGEMENT OF STAKEHOLDERS

During the course of the implementation grant period, major accomplishments in Montana included the following:





commissioner and several Board of Regents by Kevin Corcoran, Lumina’s program director for the Productivity Initiative. Corcoran presented Tuning as a way to establish common quality outcomes for certificate and degree programs.

Late 2012 Commission staff began working with the International Brotherhood of Electrical Workers to discuss ways to develop a prior learning assessment protocol for registered apprentices pursuing a degree.

Jun-Oct 2013 Lumina and the Office of the Commissioner of Higher Education sponsored convenings on the Tuning process. The September meeting was attended by faculty from many University System campuses, the Governor’s education policy advisor, representatives from the Office of Public Instruction and a tribal college leader.

POLICY ACTION

More than 10,000 courses from 60 disciplines (all undergraduate courses) now have common course numbers and uniform course outcomes as a result of the University System’s work since 2007. This standardization expedites the review of transcripts and facilitates students’ ability to determine which courses are applicable to the University System’s transfer core. In 2010, the Regents further improved transfer opportunities by approving *Choices That Count*, a set of fully articulated, commonly numbered courses guaranteed to meet university general education requirements and to transfer for full credit statewide. In addition, as a result of College!NOW’s work in expanding the mission of two-year colleges, transfer associate degrees are now available at all University System two-year campuses.²¹

All undergraduate courses in Montana now have common numbering.

A pilot Tuning initiative that seeks to align associate and bachelor’s programs in business at University System two-year and four-year institutions will also help streamline transfer. The initiative will include the development of common student outcome requirements at both the program and course levels.

In 2013, legislation was passed requesting that the Regents develop criteria for Prior Learning Assessments for military-based courses, with the intent to establish consistent practices throughout the University System. As a result, the Regents revised the University System’s transfer policies to provide military and veteran students the opportunity to demonstrate, for credit, college- and university-level learning gained in military-based courses, trainings, and experiential settings.²²



Efforts to transform two-year colleges included improving the transition between adult basic education and postsecondary institutions by better understanding, collecting, and sharing promising practices that occur in the transition from adult basic education programs to Montana’s two-year campuses. In 2012, the Regents created a Developmental Education Task Force to recommend systemwide improvements in developmental education. In 2013, the Regents adopted the task force’s recommendations spanning college readiness, placement and assessment, developmental education course redesign, and student success and advising.²³

To improve the transition from adult basic education to college, three bridge program models were piloted. Successful transitions practices were shared with both two-year campuses and adult basic education programs.

College!NOW also improved student transitions from high school to college. The grant team worked with the state’s Career and Technical Education program, Big Sky Pathways, to articulate 350 career and technical education pathways in 155 high schools and in all public two-year colleges, plus two tribal colleges.²⁴

Analysis: With transfer policies and systems in place attention may now need to be on implementation at the institutions

The University System’s work on transfer policies received consistent media attention. News articles about the mission expansion, renaming and rebranding of the colleges of technology often mentioned the improved transfer opportunities that would result from expanding the institutions’ missions.²⁵ At least one editorial and one op-ed piece highlighted improvements in transfer systemwide as a result of the common course numbering initiative, a perspective that was shared by several SPEC interviewees.²⁶

The University System’s focus on adult basic education and developmental education was described by interviewees as an important shift for the state. As a result of College!NOW’s work, adult basic education is more closely linked to higher education pathways and the University System is adopting a systemwide approach to developmental education. It will be important to track the extent to which these changes contribute to improved student retention and completion rates.

Some faculty resist new directions in two-year colleges.

Although state policies, procedures, and tools are in place to increase student opportunities for transfer from two- to four-year institutions, significant work remains to be done to gain full acceptance of faculty. One interviewee noted that some faculty at the two-year colleges and at

the four-year institutions have not fully accepted the new transfer courses or degree programs at the two-year colleges. For example, some two-year college faculty who spent their careers in the former colleges of technology do not agree with the new transfer mission and would prefer to stay primarily as vocational or technical institutions that offer

certificate and training programs. Likewise, some university faculty question the rigor of the two-year courses and programs. This tension may lessen over time and with faculty turnover, but in the meantime these attitudes could slow the state's progress toward seamless and efficient transfer.

REFORMING DUAL ENROLLMENT TO ACCELERATE LEARNING AND LOW-COST DELIVERY

History: Dual enrollment in Montana was not coordinated

Montana's work on accelerated learning and low-cost delivery models over the past several years focused on dual enrollment and online learning, and much of this work was accomplished through College!NOW. Historically, dual enrollment in Montana was not coordinated at the state or system level. Among public institutions, there were 12 different application processes and 12 different tuition rates for dually enrolled students.

Findings: Efforts to improve dual enrollment and develop approaches to competency-based learning statewide

In 2010, College!NOW worked with the Office of Public Instruction (OPI) to create the Montana Digital Academy, an online portal for dual enrollment in the state. The academy also offers online developmental education for students who are not prepared for college-level coursework. By fall 2012, about a third of dual enrollment at the University System took place through the Digital Academy.²⁷

Great Falls College, Helena College, Flathead Valley Community College, and Montana State University-Northern are collaborating outside the Lumina grant to develop a specialized dual enrollment program directed at workforce needs. Qualifying high school students will have the option to spend their senior year taking dual enrollment courses in both welding and general education and graduate with both a high school diploma and a certificate of applied science.

Montana made major strides in scaling up dual enrollment opportunities.

The University System had nearly 100 degree programs with up to 80% of course content available online as of 2011.²⁸ Discussion continued over the past years about using technology to further share courses and extend the reach of faculty across the state. In 2011, Montana representatives attended a Strategy Labs site visit in Salt Lake City, Utah, to learn more about Western Governors University's approach to offering competency-based certificates and degrees online. Rather than inviting Western Governors University to formally operate in Montana, the state decided to use the online resources of its own four-year institutions to meet the off-campus learning needs of place-bound and underserved students.

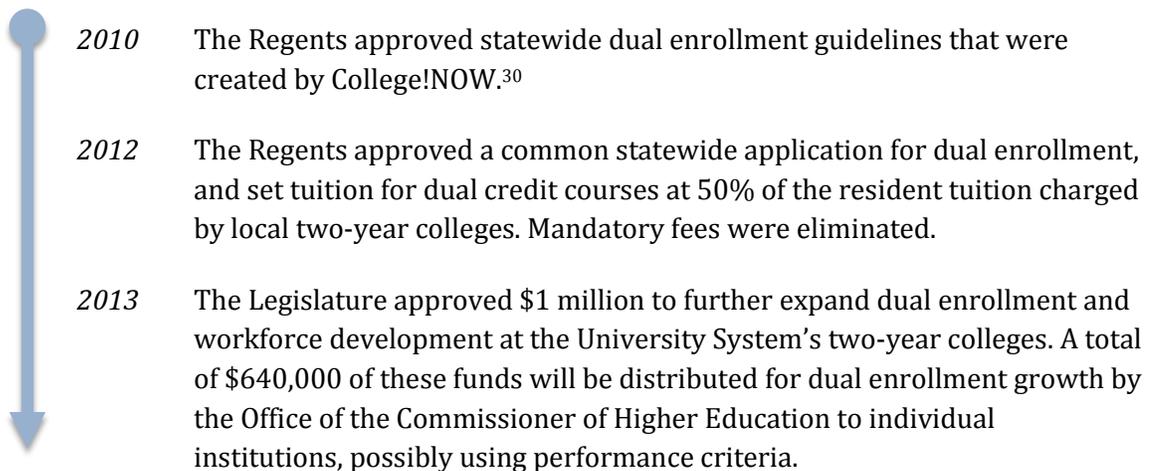
KNOWLEDGE AND ENGAGEMENT OF STAKEHOLDERS

The Regents and Office of Higher Education Commission staff worked to raise awareness of dual enrollment options such as encouraging faculty to offer dual enrollment or dual credit courses both on college campuses and in high schools. Interviewees said that, in 2012, OCHE highlighted dual enrollment opportunities at Helena College and worked to replicate that institution's model of concurrent course sections at other University System campuses. Faculty also participated in increasing dual enrollment offerings at the Montana Digital Academy from nine courses in 2011 to 60 courses in 2012. In summer 2012, College!NOW funded Strategies 360 to conduct a week-long "ad blitz" to promote dual enrollment to the public.

ACTIVE CHAMPIONING

The Regents requested funds for dual enrollment scholarships for the 2013 legislative session, and Governor Bullock included the request in his biennial budget recommendations. The Governor also highlighted dual enrollment in his 2013 state-of-the-state address.²⁹

POLICY ACTION



Analysis: Dual enrollment efforts align with Montana's move to comprehensive two-year colleges

Montana's new models have not received substantial media attention. However, the 50% discount on tuition and removal of mandatory fees for dual enrollment received some favorable coverage when it was passed,³¹ and the "ad blitz" conducted by Strategies 360 temporarily resulted in more calls than the system staff could routinely handle. The Montana Digital Academy received positive media coverage in January 2013.³²

According to one interviewee, Montana's focus on dual enrollment stemmed in part from research showing that students who graduate faster tend to be those who start with earned

credits (for example, from dual enrollment or Advanced Placement classes). Respondents said that the 50% discount on tuition for dual enrollment greatly expands the opportunities for high school students and promotes awareness of the affordable opportunities provided by the state's two-year colleges. Representatives from the College!NOW team indicated that the new tuition discount and common statewide application contributed to increases in both face-to-face and online dual enrollment courses in the University System.

A higher education leader commented that dual enrollment got a slow start in Montana because of widespread concerns among high school teachers that their jobs could be in jeopardy if more high school students enrolled in college-level courses. However, according to this respondent, as word spread that qualified high school teachers could teach the courses and that students would only pay 50% percent of the community college tuition, the idea took off "like wildfire."

Many interviewees indicated that dual enrollment would likely continue to be a priority for Montana, in order to expose more students to higher education and give them a head start on earning certificates or degrees. The Montana Digital Academy may be a large part of the solution since it can remove geographic access barriers faced by students in rural, isolated areas. In sum, the new statewide policies on dual enrollment and the Montana Digital Academy appear to be well aligned with the state's vision of providing affordable access to a high-quality system of two-year and four-year postsecondary education.

Montana's new Digital Academy may shrink geographical boundaries to higher education.



Business Efficiencies

The University System is working to align business practices and standardization of software codes throughout its information system, and to integrate those systems to enable efficiencies and seamless student enrollment across its campuses.

History: Montana's integration of IT has been recent

Montana's focus on administrative cost savings has been the driving force behind the integration of information technology systems across the University System. As of 2009, Montana State University housed the information systems for its four-year campuses and its three affiliated colleges of technology at a single site. Data for several University of Montana campuses were housed at a different site, and some institutions maintained their own information systems.

Findings: Some advancement of IT integration but more is needed

KNOWLEDGE AND ENGAGEMENT OF STAKEHOLDERS

Integrating IT across campuses would enable the development of a virtual university system.

Montana's work to continue integrating information technology systems stemmed partly from a key objective of its original proposal to Lumina: the development of a virtual community college. After examining models in other states, including those in South Dakota and Colorado, University System staff realized that a virtual community college

would require seamless enrollment across all University System campuses, which would necessitate integrated information capabilities.³³ Consequently, Montana shifted its attention to technology integration to eventually enable the development of a virtual university system.

Montana team members note a range of efficiencies that software integration produces, including: (1) centralization of back office functions; (2) seamless enrollment between campuses; (3) standardized monitoring of institutional and student performance; and (4) development of electronic post-secondary transcripts. The Office of the Commissioner of Higher Education estimated the cost of implementing a fully integrated system at approximately \$20 million. Interviewees said that given that the Legislature is unlikely to appropriate such a large sum, OCHE solicited in-kind staff contributions from chief information officers at the two flagship campuses—Montana State University Bozeman and University of Montana Missoula—to advance the work.

ACTIVE CHAMPIONING

In early 2012, the Regents identified the development of an integrated information system as one of several initiatives to pursue during the 2013 legislative session. The 2013 revisions to the University System's strategic plan included pursuit of an integrated information system as an efficiency and effectiveness goal.

POLICY ACTION

The University System developed operational policies and procedures to guide the establishment of the integrated system during the grant period, including: (1) developing common data definitions across two- and four-year public institutions; (2) bringing Miles and Dawson Community Colleges onto the University System's Banner software platform; (3) migrating all student data to the University System's data warehouse; and (4) establishing high-speed connectivity for all two-year campuses. The University System reported that several tribal colleges also will benefit from the new network links.³⁴

For the 2013 legislative session, the Board of Regents requested \$20 million for the information system, and the Governor recommended \$5 million in his proposed budget. Legislative appropriation committees did not appropriate the \$5 million.

Analysis: Integration of IT will require more than just additional funding

Montana respondents agreed that an integrated information system has the potential to facilitate enrollment and seamless transfer for students, as well as reduce administrative costs for institutions. Factors that contributed to the work included new leadership on several campuses and among Regents, who were described as wanting the University System to function more as a "system" and less as a "confederation" of independent institutions.

Respondents indicated that full integration of technology systems will require additional funding. The fact that the work is progressing through in-kind staff contributions from Montana State University and University of Montana campuses shows promise. One interviewee said that the pace of information technology integration may actually increase, since each of the flagship campuses have hired new chief information officers, both of whom are interested in and understand the value of an integrated system.

Integrating existing information systems often raises policy and personnel issues as the system becomes fully operational. Having the commitment of the chief information officers at the two flagship campuses is crucial, but next steps will likely require additional outreach. For example, one institutional leader said:

"I think that we still need to do a little bit of groundwork in building trust among campuses, who tend to, some of them, you know, to see... information

systems with suspicion. So that, that part needs to be better explained to each campus so there's less resistance internally."

It is too early to know with certainty, but the creation of an integrated information system may provide a keystone to the development of a truly statewide public higher education system in Montana. How well OCHE and campus leadership manage administrative and personnel concerns, however, will likely impact the overall success of such a system.



II. Insights across the Four Steps

OVERALL INSIGHTS AND TAKEAWAYS

Lumina provided a wide range of inputs and value-add contributions to Montana’s productivity work. These were summarized above in Tables 1 and 2, along with the state’s major achievements in Table 3. For more information about Montana’s achievements, see Section I of this report.

Key themes about Montana’s success

Montana’s work with Lumina and the Strategy Labs Network over the past five years focused on efforts to expand the mission of, rebrand, and transform its two-year colleges, and to develop a performance-funding model. SPEC’s data shows that policy development is highly contextual and that success depends on the interplay among factors and priorities within the state. Timely access to pertinent information, critical resources, and technical support can help to prompt and shape state actions. In addition, champions, that is, state leaders supporting and highlighting the work, played a critical role in Montana’s state policy development.

TIMING AND PERSISTENCE

Several respondents noted that the appearance of the Lumina initiative was critical to the success of policy outcomes in Montana. For example, the state was already poised to transform the role of two-year colleges within its public system of higher education prior to the Lumina grant. The grant arrived at a time when political will was building for change and the leadership was in place to take action to develop comprehensive two-year colleges. Grant funding and technical resources provided the state with crucial information and momentum to shape its vision, develop its strategic direction, and implement its plans including engagement with stakeholders and outreach to the public.

State leaders were already involved in general discussions about performance funding when they began participating in the Lumina initiative, but the sustained resources available over several years through the productivity work helped the state to take action. In 2009 and 2010, a state workgroup considered options for performance funding and recommended a model to the Board of Regents. In 2010 and 2011, discussions continued but did not lead the Regents to develop their own recommendations. Turnover among Regents likely delayed the work. In 2012, it appeared likely that Montana would back away—at least temporarily—from the development of performance funding. Yet, the

state’s continued access to financial support, public engagement, and technical expertise provided by Lumina, HCM Strategists, and Public Agenda appears to have prompted the Regents to take action. As a result, in early 2013 the Board of Regents, supported by the Governor and Legislature, committed to a short-range plan for performance funding, with the intent to develop a long-range plan and related metrics the following year.

CHAMPIONING AND LEADERSHIP

Many respondents emphasized the roles that individuals played as champions by supporting and highlighting the work of College!NOW. For example, the Governor, the commissioner of higher education, several legislators, and the presidents of the flagship universities provided consistent support for and active promotion of the development of comprehensive two-year colleges within the University System. Given the scope and complexity of renaming, rebranding, and expanding the missions of the University System’s

Timing, persistence, resources, information, and champions were keys to Montana’s success.

former colleges of technology and college programs, the work could easily have been stalled or thwarted at multiple stages. The willingness of leaders at all levels to pursue a common vision for two-year education in the state, despite the inevitable challenges, was vital.

Deeper, more widespread leadership beyond championing by individuals appears to be emerging in Montana. For example, the work was sustained over multiple years despite extensive personnel changes at high levels of state leadership. The Governor, the higher education commissioner, the deputy commissioner for two-year education, five of seven

Deep and widespread leadership is emerging in Montana that supports productivity. This bodes well for sustaining current progress.

Regents, both flagship university presidents, and several executive officers at the two-year colleges were replaced during the grant period. Almost paradoxically, these changes seemed to strengthen the work rather than slow it. Grant team members attributed this success to a consistent commitment from top-level leaders to the new vision for two-year education as well as efforts to bringing in additional leaders who shared that commitment.

ENGAGEMENT AND PUBLIC WILL-BUILDING

A major challenge for Montana was communicating the value of providing improved access to a more comprehensive system of public two-year colleges to the public and to some faculty members. Section I of this report discusses the efforts by state leaders to mount extensive public outreach through listening tours, public meetings, and marketing campaigns. Respondents agreed that these efforts were crucial in allowing concerns to be shared and addressed, thus garnering acceptance and even buy-in from local communities. In the process, the state articulated a unified vision for a more comprehensive system of higher education, as noted by one respondent, who said that the work “has given the universities a marketable vision that the Legislature and broader public can buy into.” A

state policymaker stated about the work, “We’ve come up with tangibles that are marketable to the broader public and the very narrow audience of the Legislature for adhering appropriations and additional investment.”

Some respondents identified faculty engagement as a missed opportunity, particularly during the early years of the initiative. One respondent said that more substantive engagement of faculty in the rebranding work could have helped build consensus sooner, and that early engagement efforts around performance funding fell flat because the materials presented were more appropriate for legislators or executives rather than faculty. They were too “snappy” and “designed to convince,” he said, rather than presenting detailed findings, analysis, and options for faculty to consider.

“We’ve come up with tangibles that are marketable to the broader public and the very narrow audience of the Legislature for adhering appropriations and additional investment.”

State policy leader

Given the powerful roles of faculty within institutions, few higher education policy initiatives are put into practice successfully without insights and guidance from faculty. Institutional leaders can approve changes but in the end, it is faculty and mid-level managers who implement new initiatives. Without faculty buy-in, initiatives can often become derailed by half-hearted efforts at compliance. Montana now appears to be making some progress regarding faculty engagement. Respondents identified the Developmental Education Task Force, which was established by the Montana University System Board, and more recent discussions of performance funding as examples of improved faculty engagement during the grant period. The Developmental Education Task Force is charged with making recommendations related to improving access and success of adults in higher education; several faculty are members of the Task Force.

MONTANA’S USE OF THE INITIATIVE’S RESOURCES

In general, respondents said that Lumina’s productivity agenda for higher education was well aligned with the state’s priorities, and felt comfortable with the way Lumina and Lumina’s partners interacted with the state. For example, an educational leader said:

“Lumina does a very good job of providing supportive feedback, a good job of not being too forceful with its ideas, but always being there to support those ideas when they are discussed.”

Respondents identified two ways in which the state’s agenda departed from the Four Steps for Finishing First, but noted that these differences did not impede the state’s progress or prevent them from working effectively with Lumina.

1. Montana is a low financial aid state and is therefore less interested in incentivizing students through financial aid or tuition structures (Step Two). Respondents indicated that as a result, the state focused its agenda around more promising

avenues to increase completion, such as the transformation of the University System's two-year institutions.

2. The state is very focused on workforce development and alignment between higher education and local industry especially at the two-year level. State respondents said that they felt that workforce linkages were not well represented among the Four Steps.

During the grant period, respondents said repeatedly that although Montana had the desire to improve the educational opportunities provided by its two-year colleges, the accomplishments of the last few years would not have been possible without external support and resources. One higher education leader said, "What the Lumina grant has done is it's validated and provided incredible support and access to resources, people, and talent to really move forward something that the system and the Regents have been pushing for a number of years, wanting to have happen, but really did not start to happen until we started working on this grant."

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Higher education leader

Montana respondents were uniformly enthusiastic about the assistance provided by Public Agenda and the state advisor from HCM Strategists. Public Agenda was praised for its engagement of community members around the rebranding of two-year colleges and its work with faculty on performance funding. The impact of HCM's advisor, Judy Heiman, was described as "huge" by a higher education leader who emphasized the advisor's skill at helping Montana take advantage of available resources. Respondents were also very positive about the value of Lumina's National Productivity Conferences, which attendees described as a source of new ideas from other state teams and national experts. A team member said that having state legislators, business leaders, and higher education leaders attend the conference together was particularly valuable in helping to advance understanding across these roles.

Montana's state evaluation encompassed policy tracking, data analysis, and surveys designed to help College!NOW track the work and make informed decisions before moving forward. Information from the state evaluation reports was used to re-think the five College!NOW strategies in April 2011. One College!NOW leader described Montana's state evaluator as having played "a very, very important role in really serving as a check and balance, another set of eyes to look at the methodology, as well as the design of the questions for both the qualitative and quantitative research done by Public Agenda and Strategies 360."

The only Lumina resource that respondents did not find helpful was the Knowledge Collaborative website, later rebranded as collegeproductivity.org. Respondents said that state team members generally used their own internal site and did not need an additional website for online resources.

COLLABORATION WITH TRIBAL COLLEGES

The University System and the state's seven tribal colleges have not had a strong history of partnership and collaboration. College!NOW, however, provided opportunities for joint efforts and two tribal colleges participated in the Big Sky Pathways initiative to articulate 350 career and technical education pathways. College!NOW also established a relationship with the Montana and Wyoming Tribal College Council, which had its inaugural meeting in October 2012.³⁵

Collaboration will continue with at least two of the tribal colleges as the University System moves to expand workforce programs at its two-year colleges through a \$25 million Trade Adjustment Assistance Community College and Career Training grant from the U.S. Department of Labor, awarded in 2013.

Sustainability of College!NOW and cooperative efforts

College!NOW received consistent media attention for its work throughout the grant period. News stories frequently framed the work in the context of increasing completion rates and links to workforce and economic development.³⁶

When asked what had changed in Montana as a result of the productivity work, nearly all respondents pointed to the impact of the expanded missions, renaming, and rebranding of the two-year colleges. Respondents described significant changes in how two-year colleges are viewed and understood by students, faculty, staff, higher education leadership, legislators, business leaders, and the general public. For example, higher education leaders described greater openness at institutions to new roles for the two-year colleges. Several respondents noted that they no longer hear the public refer to "colleges of technology." An administrator at a two-year campus said he had received numerous invitations to speak at community groups about his college's new mission. Another respondent said that as a result of the expansion of dual enrollment, more high school students—and high schools—are communicating more effectively with two-year colleges.

Evidence of improved coordination among the leaders at higher education institutions can be seen in Montana's recent success in being awarded the competitive federal grant, as noted above. The grant was awarded partly on the basis of the institutions' record of working together at the state and system levels. Respondents attributed this cooperation directly to College!NOW's efforts.

Numerous respondents also said that College!NOW improved relationships between higher education and other groups. Two-year colleges are now working more closely with the Office of Public Instruction on dual enrollment and remediation. Several respondents said that the productivity work built trust between higher education and the Legislature, as legislators became more informed about the productivity initiatives underway on

campuses. Local industry leaders were also described as being more aware of the role of two-year colleges in meeting state workforce needs.

College affordability and student debt in Montana

In 2010, the median Montanan family income (\$55,725) was 86% of the median family income for other Western Interstate Commission on Higher Education (WICHE) member states (\$64,835).

As of October 2012, tuition and fees at the University System's two-year colleges were 97% of the average for two-year colleges among WICHE states (\$3,079 versus \$3,182). Tuition and fees at Montana's four-year institutions were 84% of the WICHE average (\$6,139 versus \$7,361).

Since 2007 Montana has not increased its funding for the Montana Tuition Assistance Program, which receives \$1.9 million annually.

The average debt incurred by Montana students has increased, from \$21,125 in 2008 to \$24,000 in 2011, which ranks 27th nationally.

SOURCES: U.S. Census Bureau. Selected Economic Characteristics Per Capita, Median Household, and Median Family Income, 2006-2010. American Community Survey 5-Year Estimates; The College Board Annual Survey of Colleges. Average In-State Tuition and Fees at Public Four- and Two-year Institutions by State, Figure 7. October 2012; The Missoulian "Report: Montana grads have more debt than the national average." October 24, 2012.

BROADER QUESTIONS AND OPPORTUNITIES

In October 2013, SPEC met with state leaders during site visits in Montana to delve into some of the implications of the state's productivity work. The purpose of these meetings was to generate an authentic exchange of perspectives about Montana's accomplishments and the broader challenges and opportunities the state faces, some of which reach beyond the grant activities. A wide range of state and higher education leaders participated in the site visit meetings, which led to vibrant and enthusiastic discussions of the following issues.

Affordability and student debt

Developing financial aid incentives for students to enroll in college and complete their degrees was not part of Montana's grant work. However, the University System has maintained a tuition freeze at two-year colleges since 2007 and at campuses that were comprehensive master's degree granting colleges and universities during six of the past eight years. Montana is known for the low price of its college tuition, and it does not invest substantially in state financial aid yet this has not prevented students from accruing large amounts of student debt.

Site visit participants shared a variety of concerns about college affordability and student debt in Montana, particularly for low- and middle-income residents. Montana's tuition and fees remain below average for Western Interstate Commission on Higher Education states, but respondents indicated that wages tend to be relatively low in Montana, and the cost of living has been increasing, which in turn makes it more difficult for limited-income families to pay for college and requires many students to take on more debt.

The state's work to contain the cost of the University System's two-year institutions, together with improved articulation agreements among two- and four-year institutions, may offer the most promise statewide for holding down the price of a bachelor's degree in the near future. The development of performance funding may also help, if incentives are effective in increasing student success and degree completion. Montana's new dual enrollment policies, along with smoother adult basic education transitions and improved developmental education options, may also help reduce time to degree and therefore student costs.

Higher education leaders also described their efforts to increase the state's investment in need-based aid, including the Regents' recommendations to the Legislature. Since these efforts have been unsuccessful so far, site visit participants also discussed ways to promote need-based aid as a way to increase completions and thereby raise educational attainment rates in Montana. Participants also described several ways in which the University System is seeking to address these challenges at the institutional level. They said, for example:

- Some colleges and universities are taking a more active role in helping students access available federal financial aid.
- Some colleges and universities are working to provide additional aid through independent fund raising.

Demographic and economic influences on college enrollment in Montana

As of July 2013, Montana's unemployment rate was 5.3%. Increased employment opportunities in different regions of the state contribute to Montana's low unemployment rate.

Between 2000 and 2010, the state's population increase was below the national average (9.7% versus 10%).

The number of high school graduates is shrinking. Between 2000 and 2010, the number of Montana residents between the ages of 5 and 17 fell by 8%.

Montana's public high school graduation rate from 2000 to 2010 has remained consistently between 78% to 79% ranking 10th highest among states.

The college-going rate is on the upswing, but as of 2010, 60.5% of high school graduates entered higher education the following fall.

SOURCES: U.S. Department of Labor, Bureau of Labor Statistics, Economy at a Glance, Montana; U.S. Census Bureau. Selected Economic Characteristics Per Capita, Median Household, and Median Family Income, 2006-2010. American Community Survey 5-Year Estimates; Postsecondary Education Opportunity, January 2013; Chance for College by Age 19 by State 1986 to 2010.

- Most Montana University System campuses are taking more active roles in explaining the consequences of debt burdens to students. Beyond required loan counseling, this can include training students in financial literacy; training student financial aid officers to encourage students to avoid loans when possible; informing students about the impacts of taking additional credits on the overall price of their degree; and routinely providing students with information about their cumulative debt, possibly across multiple loans, each term.

It was clear from the site visit discussions that higher education leaders see a strong need for increased state funding for need-based aid. Given the state's relatively low median income, such an increase could provide a boost to the state's completion efforts by reducing affordability concerns for Montana students and families.

Demographic and economic influences

In 2013, Montana adopted an ambitious goal to increase the share of adult residents with a certificate or degree from 38% in 2008 to 60% by 2025. Achieving this goal will likely require increases in student enrollment and retention from high school through college, yet the proportion of young residents in Montana is falling. In addition, many potential college students may be choosing work over higher education, given the state's strong economy.

Site visit participants in the state had a variety of viewpoints about the impact that a shrinking K-12 pipeline would have on postsecondary completion rates. One respondent said that the 60% completion goal is within reach if the state's colleges and universities can do a better job of retaining those students who are already enrolled in college. Another state leader said it would take a broader representation of the entire population to reach the state's 60% attainment goal, and that the key was getting more high school students to see postsecondary education as a viable option. A third person saw opportunities for increasing completion rates in the approximately 145,000 state residents who have completed some college and the approximately 80,000 adult residents without high school diplomas. Economic factors play a large role in productivity discussions. Respondents acknowledged that when unemployment is low, college enrollments typically decrease. They explained, however, that the situation in Montana is more complicated than the statistics present and suggested that:

- Although some regions of the state have very low unemployment, a substantial number of Montanans in those regions are underemployed in low-wage jobs.
- Even in the booming Bakken oil region, many residents are returning to college or other training because the working conditions for those without some education after high school are very difficult.
- Employers in the Bakken region and in other extraction industries, such as coal mining, require substantial numbers of skilled workers with certificates or degrees.

Ultimately, respondents said, it is true that in a robust economy, many students graduate from high school and go straight to full-time work. Nonetheless, institutions in those regions are seeing strong enrollment as people return to school to improve their skills and earn degrees that will help them move up the career ladder or into different professions. A marketing campaign at one of the newly rebranded two-year colleges was targeted specifically to adults with children who might be encouraged to take the next step in their education to improve their families' life circumstances. Site visit participants indicated that the campaign was very successful in generating interest. Taken together, these points suggest that although the strong economy in some regions has an impact on Montanans' higher education aspirations, there are currently many good reasons for those in the workforce to pursue degrees and certificates.

Changes in state perception and culture

Historically, Montana's economy has been driven by extraction industries that do not require large numbers of degreed workers. Consequently, postsecondary education was not always viewed as crucial to securing a high-paying job or comfortable lifestyle. The College!Now initiative rebranded and renamed the former colleges of technology and two college programs and expanded their missions.

Across the board, site visit participants said that the lack of a strong college-going culture had been somewhat of a barrier in the past, but that the culture is changing rapidly, and pointed to several reasons, including:

- Compared with the past, many jobs today, including those in extraction industries and agriculture, require at least some education or training beyond high school. Larger numbers of parents in Montana who do not have a degree themselves now believe that their children will need a degree to succeed.
- College!NOW's mission expansion with the resulting renaming and rebranding initiative was successful in removing some of the stigma associated with the former colleges of technology.
- The comprehensive mission of the new two-year institutions has led to greater interest from local communities. For example, high schools are increasingly showcasing dual enrollment programs.

Interviewees said cultural issues affect college-going and the two-year mission in Montana

While Montana historically has not had a strong college-going culture, Montana's college-going rate remains close to the national average.

Higher education in Montana has been primarily associated with the state's four-year universities.

Resistance to the transformation of two-year colleges among two-year and four-year faculty has been reported.

Some students at two-year campuses still feel they are viewed as "less than" their peers at four-year campuses.

State leaders indicated that these changes, taken together, are leading to new attitudes toward higher education in general and especially toward two-year education. The effect of this new appreciation can be seen in the recent passage of a local tax mill levy in the Bozeman area to provide financing for Gallatin College, a two-year institution.

The site visit discussion raised several specific internal and external cultural issues that might be barriers to the comprehensive community colleges and to increasing the state's postsecondary attainment:

- Some faculty and staff, at both the two-year and four-year institutions, were more comfortable with the traditional vocational-technical role of the two-year colleges.
- Some local communities do not yet fully understand what the new comprehensive mission of the two-year colleges has to offer.
- Some of the state's older residents, who themselves are less likely to pursue a postsecondary credential, have not yet accepted the importance of higher education for the state as a whole.
- Some segments of the community are not aware of the extent to which postsecondary education has become critical to meeting workforce needs.

Overall, it appears that Montana is beginning to make strides in changing the perceptions of state residents regarding higher education in general, and the role of two-year colleges specifically. Time will tell whether the newly expanded role of two-year education in the state will contribute to creating a culture that values higher education as a way to help residents and communities compete successfully in the global economy.

THOUGHTS LOOKING FORWARD

All of Montana's major accomplishments look like they will be sustained beyond the grant term. This sustainability is likely because most of the changes are already embedded in policy and are well aligned with the strategic direction of the state and its leaders, including the Governor, many legislators, and the higher education commissioner. For example, the expanded missions, rebranding, and renaming of the two-year colleges were identified as permanent changes. A respondent said that maintaining the tuition differential between two-year and four-year institutions would continue to be a priority for the Regents and the Office of the Commissioner of Higher Education.

At the same time, respondents were quick to note that much work remains to be done in offering a full-range of academic programs at all two-year colleges. Several people indicated that it is also crucial to continue communicating to the public about the new mission of the two-year institutions. With so much being asked of the two-year colleges, both Public Agenda and the consulting group, College Brain Trust, made it clear to the Regents that their new strategic plans were unlikely to be fully implemented without additional state funding.

Higher education leaders were also optimistic about the unified vision for state higher education that grew from College!NOW's work. They indicated that their experiences with College!NOW would make them more likely to "speak with one voice" to the Governor and Legislature about the role of higher education in meeting the needs of state residents. They said that their experiences discussing accountability and measurement of outcomes, which stemmed in part from the development of performance funding, would help them make a convincing case for funding in the future. One respondent noted that the Board of Regents and the Office of the Commissioner of Higher Education have "a great responsibility" to demonstrate how the University System is using state funding to make a difference for students.

Many questions remain about the development and adoption of a long-term performance-funding model. When asked about this, however, all respondents in the state said that performance funding was likely to be maintained in some form, possibly with adjustments over time, because it fits well with state priorities. One higher education system leader said, "Performance funding, that's going to continue - and it looks like a big step to us now and I think the steps will continue and the steps will be smaller."

Many respondents were also confident that the new focus on pathways and transfer would be maintained, including adult basic education as a transition program, dual enrollment, prior learning assessment, and stackable credentials. All of these tools will help keep student costs down. However, respondents said that the tuition freezes at the state's public institutions could not last indefinitely. As one respondent said, "there will be a breaking point" if state funding does not continue to increase.

"Performance funding, that's going to continue - and it looks like a big step to us now and I think the steps will continue and the steps will be smaller."

Higher education system leader

Several aspects of Montana's work garnered attention within the state and nationwide. For instance, two successful bridge programs to help adults transition from adult basic education to two-year colleges were used to build a model that can be scaled statewide. On a larger scale, the state is receiving national recognition for its two-year initiatives and its common course numbering system. The state has also shared these experiences with other states and with national associations. Altogether, respondents agreed that the changes in higher education in Montana, especially in the two-year sector, have been tremendous over the past four years. One higher education leader said, "Lumina Foundation has helped move mountains in the university system in the two and a half years I have been watching all of this happen and the results of the work that they've funded will be seen for decades to come."

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Higher education leader

Given the speed and the scope of Montana's changes, a state higher education leader suggested that it might be time to sit back and analyze the success of the work. Speaking broadly, he pointed out that after a while, constant change takes a toll on campus administrators and faculty who may become reluctant to support yet another new initiative. Although College!NOW was successful in re-naming and re-branding the former colleges of technology and two college programs, much work remains to be done before these institutions can fully carry out their new, more comprehensive missions. It remains unclear where the institutions will find the funds to complete the transformation. How Montana leaders address this final stage of the work is an open question.

Throughout the grant period, the support and leadership of two Governors, two commissioners of higher education, and the Board of Regents helped the state achieve a wide and interconnected array of public initiatives that are well aligned with Lumina's productivity agenda. These policy changes promise to affect education at all levels in Montana. In his 2013 state-of-the-state address, Governor Bullock called for state leaders to commit to increase the share of Montanans with a postsecondary degree or professional certificate from 40 percent to 60 percent over the next decade.³⁷ Achieving this ambitious goal will require ongoing leadership, cooperation, and contributions from both public officials and higher education leaders, including stepped-up and strategic investment in higher education from the state and increased student persistence and completion rates from colleges and universities.

Appendix I: Acknowledgments

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

At the Montana University System, John Cech, Deputy Commissioner for Two-Year and Community College Education; Mary Moe, former and first Deputy Commissioner for Two-Year Education; Tyler Trevor, Deputy Commissioner for Planning & Analysis; Susan Jones, Director of Two-Year Mission Integration; and David Hall, Compliance and Access Program Manager participated in dozens of conference calls, provided information and important documents, and/or reviewed many SPEC reports. Mick Robinson, Deputy Commissioner for Fiscal Affairs/Chief of Staff, provided information about the history of higher education funding in Montana and participated in some of the conference calls. Clay Christian, Montana Commissioner of Higher Education, offered insights that richened our understanding of the context of the higher education productivity work in the state.

Also within Montana, many legislators, higher education administrators, institutional presidents and provosts, faculty members, business leaders, students, and others 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 in.

The national partners that participated in the productivity work were also instrumental. Kristin Conklin 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 in Montana. 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 Judy Heiman in particular contributed to SPEC's conference call preparation and reviewed many reports and interview questionnaires. At HCM Strategists, Anne Dudro provided behind-the-scenes 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 findings on CollegeProductivity.org.

Many individuals reviewed prior drafts of this report: John Cech, Tyler Trevor, Susan Jones, David Hall, Judy Heiman, Jimmy Clarke, and Michelle Currie.

Over the past five 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. For this report, Wendy Limbert and John Wittstruck served primary roles in visiting the state,

interviewing state leaders, gathering and analyzing data, drafting the report, and developing its findings and analysis. Thad Nodine facilitated our writing and analysis, and helped to clarify and draw out our key findings. 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. Other contributors on SPEC's team also provided invaluable feedback: Anne Clark, Melanie Hwalek, Stephen Maack, Ruth Mohr, John Muffo, Rick Voorhees, and Bob Williams.

Finally, SPEC is grateful to Lumina, 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 lessons from the evaluation portrayed in this report contribute to Montana's productivity efforts and our nation's achievement of Lumina's Goal 2025.

Appendix II: Methodology

In 2008, Lumina asked SPEC Associates (SPEC) to evaluate its investments in the seven states participating in an initiative known as Making Opportunity Affordable, which later became known more broadly as Lumina’s higher education productivity initiative. The central evaluation question involved the relationship between the initiative’s work and changes in state and systemwide policies that affect productivity. It is important to note that SPEC’s evaluative efforts focused on the effectiveness of Lumina’s investments in each state, rather than the effectiveness of each state’s efforts in accomplishing its grant goals. Each of the states had access to an in-state evaluator to evaluate its own work.

Some of the challenges in this evaluative work included the following:

- The initiative’s overall purposes, objectives, and strategies emerged over the course of the work and changed several times during the grant period.
- The initiative did not adopt a theory of change or articulate critical assumptions undergirding its Four Steps agenda.
- The initiative did not adopt an overall cross-state definition of productivity or strategy to measure progress or effectiveness in achieving the initiative’s objectives.

SPEC gathered data from a wide range of sources and looked deeply at each state’s efforts. SPEC analyzed its data using multiple methods, as summarized below. The period of examination is from the beginning of Lumina’s work with the states in 2008 through the fall of 2013. SPEC’s evaluation team consisted of nine seasoned professionals in the areas of program evaluation, higher education systems and governance, state higher education policy, 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 evaluation team who were responsible for identifying relevant documentation, participating in monthly conference calls with state teams, interviewing higher education leaders, analyzing state-specific data, and drafting state-specific reports.

This individual state report is one of seven that examines the productivity-related accomplishments in each of the implementation states during the grant period. A national technical report, *Cross-State Technical Report for Lumina’s State-Based Efforts to Improve Productivity in U.S. Higher Education: A Summary of Deeper Work in Seven States*, provides a detailed summary of the work across the seven states. 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 reports are available at www.specassociates.org.

Data analyses and interpretation

Data analyses and interpretation included the following:

- Examination of each state’s goals and achievements through 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
- Comparison of states’ progress in productivity-related activities
- Analysis of patterns and trends across states on factors external to higher education
- Sense-making via:
 - Focused discussions with state grant team members;
 - Final site visit discussion with key higher education leaders;
 - Feedback on reports from state team members and from Lumina’s national support organizations;
 - Reflection with Lumina staff and its national productivity partners; and
 - Ongoing interpretive discussions among evaluation team members.

Data sources

Qualitative data were collected from the following sources, and included approximately 275 documents related to Montana:

- State and national reports and legislation
- Focused observations at national and state meetings
- Monthly conference calls with state teams over a three-year period
- In-depth telephone interviews with higher education leaders, business representatives, faculty, students, and state legislative policymakers
- Three site visits to each implementation state for in-person interviews with stakeholders
- Focused interviews with national organizations and individuals connected to Lumina’s investments in productivity
- Media reports

Quantitative data were collected from the following sources:

- Reports and secondary data from these sources:
 - Higher education boards
 - Legislative research organizations
 - U.S. Census Bureau
 - State demographers
 - K-12 agencies

- Statewide nonprofit organizations
- Higher education and education policy organizations

- Databases available from these sources:
 - 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)

Endnotes

¹ College Board. (n.d.). Trends in Higher Education: In-State tuition and Fees by State, 2013-14, and Five-Year Percentage Changes. Retrieved from: <https://trends.collegeboard.org/college-pricing/figures-tables/in-state-tuition-fees-state-2013-14-and-5-year-percentage-changes>.

² Lumina Foundation. (n.d). *College Productivity: Four Steps to Finishing First, An Agenda for Increasing College Productivity to Create a Better-Educated Society*. Indianapolis, IN: Author.

³ SPEC Associates. (2012, December 31). *National Evaluation of Lumina Foundation's Productivity Work: Interim Report for Montana*. Detroit, MI: Author.

⁴ SPEC Associates. (2009, March). *Montana Mini Case Study*. Detroit, MI: Author. Copy in possession of SPEC Associates.

⁵ Office of the Commissioner of Higher Education. (2013). *MUS Strategic Plan 2013*. Helena, MT: Montana University System. Retrieved from http://mus.edu/data/strategic_plan.asp.

⁶ *College!NOW Progress Report*. (2010, Nov-Dec). Retrieved from <http://mus.edu/2yr/CollegeNOW/assets/updateNov-Dec2010.pdf>.

⁷ Kadlec, A., & Rowlett, I. (2013, April 25). *Montana Performance-Based Funding Focus Groups*. New York, NY: Public Agenda. Retrieved from <http://www.umt.edu/facultysenate/documents/FSDocs%2013-14/PublicAgendaOverviewPerformance-BasedFundingFocusGroupsMontana1.pdf>.

⁸ Montana University System. (n.d.). *Performance Funding Planning Timeline, 2013-2014*. Helena, MT: Author. Retrieved from <http://mus.edu/CCM/performancefunding/PFSC%20Timeline.pdf>.

⁹ Johnson, C. J. (2013, March 7). Regents: Faculty involvement key in writing performance measures. *Billings Gazette*. Retrieved from http://billingsgazette.com/news/state-and-regional/montana/regents-faculty-involvement-key-in-writing-performance-measures/article_6b99b370-3ecd-5c40-8bef-fb4037970b57.html.

¹⁰ Support performance-based funding [Editorial]. (2013, March 24). *The Missoulian*. Retrieved from http://mtstandard.com/news/opinion/support-performance-based-funding/article_66b937ec-9420-11e2-b9a2-0019bb2963f4.html.

¹¹ Johnson, loc. cit.

¹² Ibid.

¹³ Johnson, C. J. (2013, February 8). Montana state universities to establish performance standards. *The Missoulian*. Retrieved from http://missoulian.com/news/local/montana-state-universities-to-establish-performance-standards/article_7eb0346a-7196-11e2-b379-001a4bcf887a.html.

¹⁴ Kadlec, A., & Rowlett, I. (2013, April 25). *Montana Performance-Based Funding Focus Groups*. New York, NY: Public Agenda. Retrieved from <http://www.umt.edu/facultysenate/documents/FSDocs%2013-14/PublicAgendaOverviewPerformance-BasedFundingFocusGroupsMontana1.pdf>.

¹⁵ National Association of State Student Grant and Aid Programs. (2012). 43rd Annual Survey Report on State-Sponsored Student Financial Aid 2011-2012 Academic Year. Retrieved from <http://www.nassgap.org/viewrepository.aspx?categoryID=3>.

-
- ¹⁶ SPEC Associates. (2009, March). *Montana Mini Case Study*. Detroit, MI: Author. Copy in possession of SPEC Associates.
- ¹⁷ NCHEMS Information Center. (2014). *Net cost of attendance: Percent of family income needed to pay for college - by type of institution*. Retrieved from <http://www.higheredinfo.org/dbrowser/?level=nation&mode=data&state=0&submeasure=369>.
- ¹⁸ SPEC Associates. (2012, December 31). *National Evaluation of Lumina Foundation's Productivity Work: Interim Report for Montana*. Detroit, MI: Author. Copy in possession of SPEC Associates.
- ¹⁹ Vandal, B. (2013, March 8). *Setting a State Agenda for College Completion*. Presentation to the Montana University System Board of Regents, Helena, MT. Retrieved from http://mus.edu/board/meetings/2013/Mar2013/MontanaCCA_presentation.pdf.
- ²⁰ Cech, J. (2011, May 26). Guest opinion: College!NOW boost learning opportunities for Montanans [Opinion]. *Billings Gazette*. Retrieved from http://billingsgazette.com/news/opinion/guest/guest-opinion-college-now-boosts-learning-opportunities-for-montanans/article_a58d8d1b-b4d7-535d-a876-7d0a72309eca.html;
Christian, C. (2011, September 1). Change is fast-approaching for Montana's two-year colleges. *College!NOW Our Story, Issue 1*. Retrieved from http://mus.edu/2yr/COLLEGENow/news/CollegeNow_eNews.html.
- ²¹ *College!NOW: The First Three Years*. (n.d.). [Report for the Lumina Foundation]. Copy in possession of SPEC Associates.
- ²² Montana University System Board of Regents. (2013, May 23-24). *Revision of Board of Regents Policy 301.5, Transfer of Credits; MUS and Community Colleges*. [Board of Regents meeting, item 159-106-R0513]. Helena, MT: Montana University System. Retrieved from <http://www.mus.edu/board/meetings/2013/May2013/ARSA/159-106-R0513.pdf>.
- ²³ Montana University System Board of Regents. (2013, May 17). *Executive Summary - Developmental Education Reform Task Force Final Report*. Helena, MT: Montana University System. Retrieved from http://mus.edu/board/meetings/2013/May2013/TwoYear/DevEdTaskForce_ExeSummary_a1.pdf
- ²⁴ *College!NOW: The First Three Years*. (n.d.). [Report for the Lumina Foundation]. Copy in possession of SPEC Associates.
- ²⁵ e.g., Associated Press. (2011, December 19). State two-year colleges seek new names, better transfer policies. *The Missoulian*. Retrieved from http://missoulian.com/news/state-and-regional/state-two-year-colleges-seek-new-names-better-transfer-policies/article_3f87cace-2a92-11e1-9da8-001871e3ce6c.html.
- ²⁶ 'Vo-tech' not what it used to be [Editorial]. (2011, June 12). *Independent Record*. Retrieved from http://helenair.com/news/opinion/editorial/article_458f3592-94bf-11e0-bcfd-001cc4c002e0.html;
McLean, A. (2012, Feb 22). "Guest Opinion: Montana University System delivers great return on investment" [Opinion]. *Billings Gazette*. Retrieved from http://billingsgazette.com/news/opinion/guest/guest-opinion-montana-university-system-delivers-great-return-on-investment/article_f20e0283-8949-54f2-87df-e41859bb5908.html.
- ²⁷ *College!NOW: The First Three Years*. (n.d.) [Report for the Lumina Foundation]. Copy in possession of SPEC Associates.
- ²⁸ Montana University System Board of Regents. (2010, November 18-19). *Meeting Minutes*. Helena, MT: Montana University System. Retrieved from <http://mus.edu/board/meetings/2011/Jan2011/BOR11-18-19,2010MINUTESFINAL.pdf>.

²⁹ Bullock, S. (2013, January 30). *State of the State Speech*. Retrieved from <http://www.governing.com/news/state/montana-bullock-2013-speech.html>.

³⁰ *College!NOW: The First Three Years*. (n.d.). [Report for the Lumina Foundation]. Copy in possession of SPEC Associates.

³¹ e.g., Associated Press. (2012, August 24). High school students get dual-enrollment discount. *Billings Gazette*. Retrieved from http://billingsgazette.com/news/state-and-regional/montana/high-school-students-get-dual-enrollment-discount/article_d8efab36-e839-5be7-97b4-88851589f37b.html.

³² Rogers, R. (2013, January 18). Montana Digital Academy picking up steam. *Billings Gazette*. Retrieved from http://billingsgazette.com/news/local/education/montana-digital-academy-picking-up-steam/article_90a542a0-7fa2-5956-858b-d1e7a24e3b25.html.

³³ *College!NOW: The First Three Years*. (n.d.). [Report for the Lumina Foundation]. Copy in possession of SPEC Associates.

³⁴ Ibid.

³⁵ Ibid.

³⁶ e.g., College investment pays off in state [Editorial]. *Missoulian*. Retrieved from http://missoulian.com/news/opinion/editorial/missoulian-editorial-college-investment-pays-off-in-state/article_72403714-de6c-11e2-b1b8-001a4bcf887a.html.

³⁷ Bullock, S. (2013, January 30). *State of the State Speech*. Retrieved from <http://www.governing.com/news/state/montana-bullock-2013-speech.html>.