

Performance-Based Funding: *The National Landscape*

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INTRODUCTION

On August 22, 2013, in his speech at the University of Buffalo, President Barack Obama squarely placed the issue of college affordability and performance metrics on the nation's agenda. "I think we should rate colleges based on opportunity. Are they helping students from all kinds of backgrounds succeed — (applause) — and on outcomes, on their value to students and parents." (Obama, 2013).

The president's remarks will undoubtedly spur increased attention to performance metrics. In his speech, he called for metrics like "How much debt does the average student leave with? How easy it is to pay off? How many students graduate on time? How well do those graduates do in the workforce? Because the answers will help parents and students figure out how much value a college truly offers." (Obama, 2013).

This issue brief provides an up-to-date analysis of the current status of performance-based funding in the fifty states and the District of Columbia. It includes a section on the historical context of performance-based funding (PBF), with emphasis on community colleges, the sector of U.S. higher education that appears to have seen the most state-level legislation in recent years. A discussion of early efforts at PBF that date to the late 1970s is presented, as well as PBF 2.0 and more recent efforts spurred by the National Governors Association and other groups, particularly the philanthropic foundations and their funded advocacy groups. The issue brief concludes with discussion as to whether it works and lessons learned.

- Performance-based funding (PBF) is a key policy response to the call for greater transparency and accountability in public higher education.
- 39 states are currently active in PBF: 23 states are in, or have had, formal discussions about PBF.
- Many new PBF models, known as PBF 2.0, include: intermediate measures, greater portions of state funds distributed on performance, and stakeholder input.
- Despite recent attention, there is not compelling evidence of the link between PBF and improved student outcomes at this time.
- States considering PBF implementation or modification are encouraged to consider lessons learned: importance of stakeholder involvement, sector-specific measures, linking measures with state goals for workforce and economic development, gradual phase-in, and commitment to significant funding tied to PBF.

Table 1. PBF Activity by State

Performance-Based Funding Activity	# of States
 Performance Funding in Place	23
 Transitioning to Performance Funding	5
 Formal Discussions of Performance Funding	10
 No Formal Activity	13

Source of PBF Activity based on the February 2013 version developed by the National Conference of State Legislatures (NCSL) and has been modified and included with permission from NCSL, <http://ncsl.org/issues-research/educ/performance-funding.aspx>.

Performance-Based Funding, The National Landscape

Increasing degree completion at America's public colleges and universities is pivotal for the nation's economic competitiveness and long-term economic growth. To meet this goal in a time of unprecedented fiscal strain, policymakers and higher education leaders need comprehensive, consistent performance metrics to shape funding strategies and pinpoint areas for improvement.

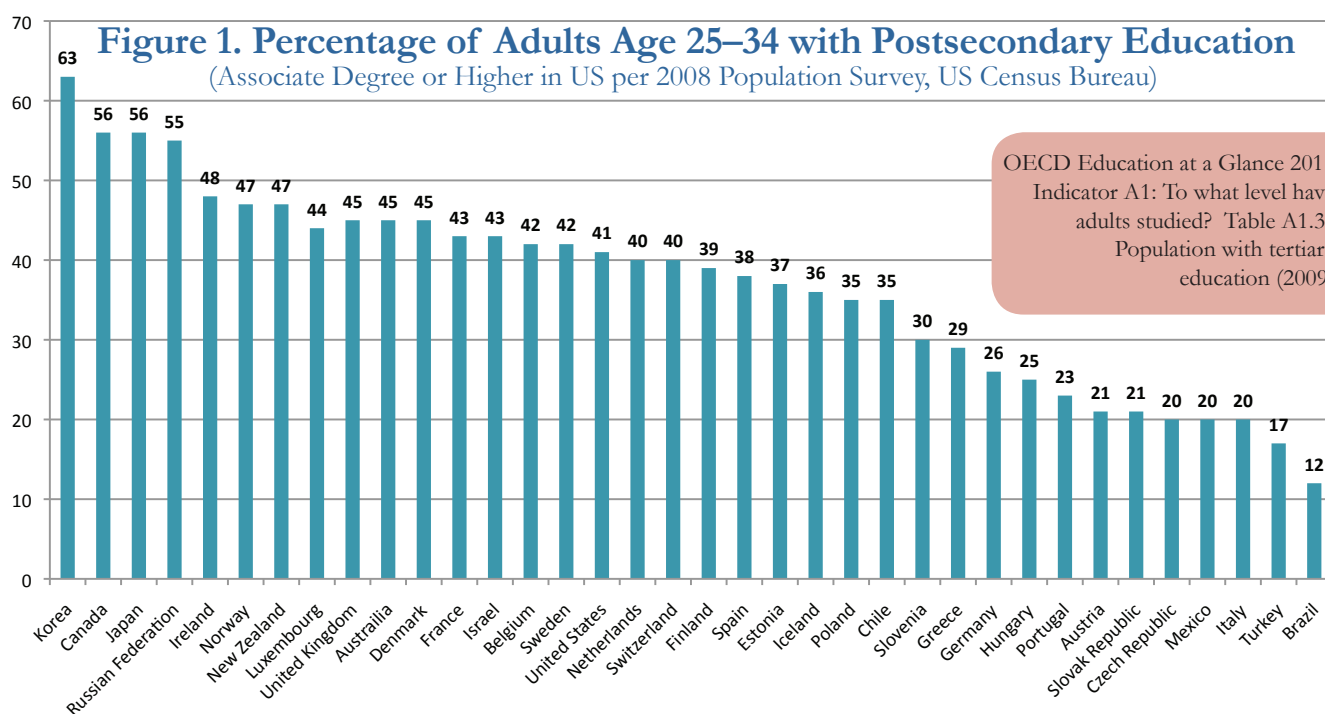
— *National Governors Association Work Group on College Completion. (Reyna, 2010, p. 5)*

In the twentieth century, the United States, with the world's most highly educated citizenry, attained global economic and political prominence. Today, this global ranking has been displaced, as the proportion of the U.S. population age 25–34 with an associate degree or higher has dropped to 41% (OECD, 2011) (See Figure below). Current U.S. national policy reflects the realization that reclaiming our prominence in the global economy can only be accomplished with an educated and technologically savvy workforce.

In a direct response to this critical need, President Obama (2009) announced his goal for the United States to have “the best educated, most competitive workforce in the world.” The centerpiece of Obama's 2020 Goals include increasing the number of college gradu-

ates, with all Americans completing at least one year of college. The college completion focus is both a workforce and an economic development issue and, as such, has shifted attention to postsecondary education. The 2020 goals are incorporated in the White House Completion Initiative which includes measuring progress on five indicators: college costs, graduation, student loan repayment, student loan debt, and earnings potential (Kanter, 2012). The demand for higher college completion rates comes at a time when public colleges and universities are facing several issues in direct competition to their goals: state appropriations cuts, increasing numbers of at-risk (underprepared, low-income, and/or non-traditional) students, decreasing student financial aid, and rising tuition (AASCU State Relations and Policy Analysis Team, 2013; Harnisch, 2011a; Mortenson, 2010).

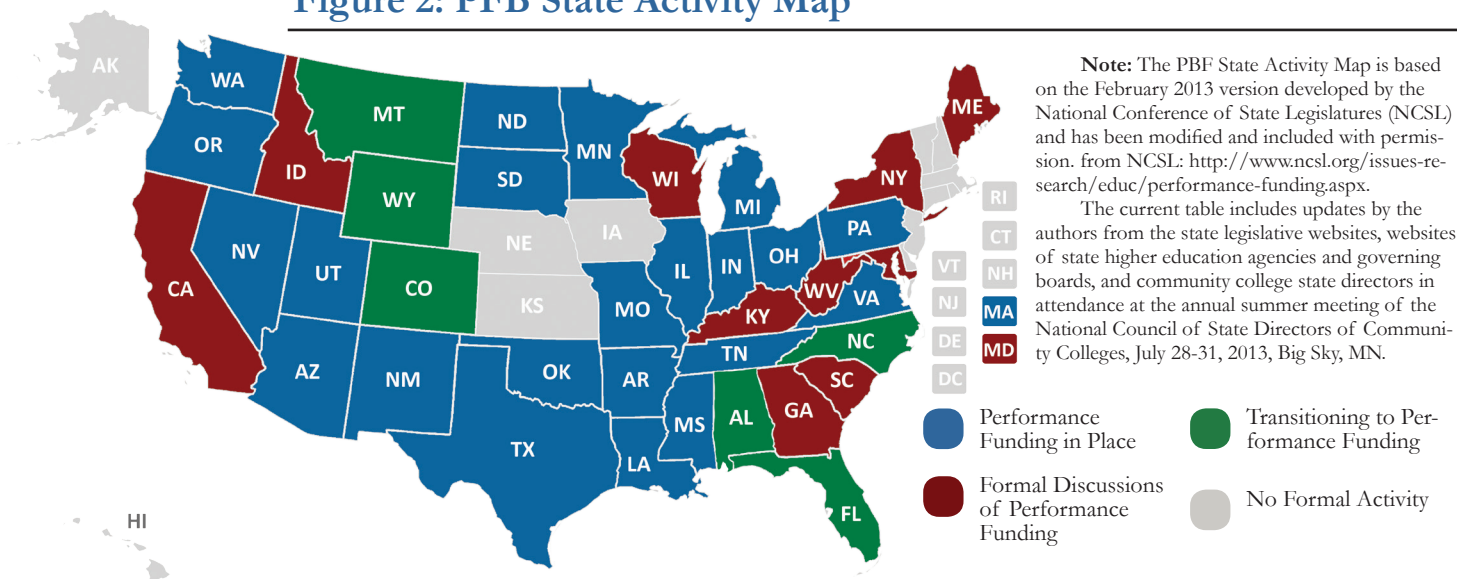
Many states have increased oversight of public higher education through accountability initiatives (National Conference of State Legislatures, 2013) even while resources allotted to the institutions have declined (National Governors Association and the National Association of State Budget Officers, 2012). The traditional



method for measuring success and providing state funding to public colleges has relied primarily on enrollment thus ensuring a focus on accessibility; however, the enrollment-based model is limited and does not align with the

receive,” (Blankenberger, 2011, slide 12). As the demand for greater responsiveness to the state’s educational and workforce needs increases, PBF policies aligned with the state’s agenda for higher education offer a way to begin meeting this demand.

Figure 2: PFB State Activity Map



current national agenda for increasing the number of college graduates. The challenge has now become finding a formula to “shift incentives away from the costs of educational inputs toward stronger performance outputs, while still maintaining strong student access to education,” (New Mexico Higher Education Department, 2011, p. 1).

One option for state-level response to current national agendas is the introduction of performance-based funding models within higher education policy. Currently being utilized by twenty-three states (with more transitioning to or involved in formal discussions) (See Figure 2), performance-based funding extends beyond enrollment to include incentives for productivity and completion (or transfer) (Harnisch, 2011a; NCSL, 2013). Simply defined, performance-based funding (PBF) “rewards institutions that meet state goals,...is based on outputs instead of inputs,...(and) the more goals that institutions meet, the more funding they

What is PBF?

Unlike performance-based budgeting which utilizes performance indicators, among other factors, to influence funding decisions, performance-based funding relies on a formula which utilizes performance indicators to decide actual funding amounts (Dougherty & Hong, 2005; Rabovsky, 2012). Specifically, some portion of state allocations is awarded based on institutional outcomes. Thus, performance-based budgeting is indirectly tied to funding, while performance-based funding (PBF) is directly tied to funding as “a system based on allocating a portion of a state’s higher education budget according to specific performance measures,” (Miao, 2012, p. 1).

Harnisch (2011a), referring to resource dependency theory (Pfeffer & Salancik, 1978), states that “leaders of public colleges and universities are significantly dependent on state

appropriations, ... (and as such,) they will take the measures necessary to retain or enhance their institutions' funding" (p. 2). States utilizing the PBF model seek to influence institutional change toward improving performance through funding incentives (Harnisch, 2011a; Rabovsky, 2012). Miao (2012) has identified three models of PBF currently in use by states: output-based funding formula, performance set-asides, and performance contracts.

Output-based funding formulas provide fiscal incentives for positive improvement in specific metrics. This model is utilized within the state funding formula, as a portion of the annual base appropriations. Often weighted for institutional mission, this model allows community colleges to increase their total appropriations through improved performance on identified metrics. Performance set-asides reserve a percentage of the state funding to be awarded to high performing institutions. The set-aside dollars may be a portion of the annual base appropriation or separate bonus funding. Community colleges compete with each other for the set-aside funding by achieving a targeted measure of performance set prior to the year. Performance contracts

between the individual community college and the state provide a third option for PBF models. Through this model, funding is awarded if the community college meets the agreed upon performance goals set forth in the contract (Miao, 2012).

Using a specified percentage of state appropriations (generally 1-25%) PBF is awarded based on the outcomes of certain performance indicators that reflect institutional progress toward both institutional mission and state goals (Harnisch, 2011a). As a results-based

model, PBF considers success through outcomes (such as credit completion), as opposed to inputs (credit enrollment). Current PBF models incorporate indicators of at least two types: general outcomes and progress outcomes (Harnisch, 2011a; Miao, 2012). Depending on state priorities, subgroup outcome indicators and high-need subject outcome indicators may be included, as well (Harnisch, 2011a). Previous literature (Dougherty & Reddy, 2011; Harnisch, 2011a; Miao, 2012; NCSL, 2013; WHECB, 2011) indicates higher education performance-based measures have evolved over time to include indicators such as:

Types of Performance Indicators:

Current as of August 15, 2013

- **General outcome indicators:** graduation rate, number of degrees/certificates awarded, number of degrees/certificates awarded per FTE, research or grant funding awarded, job placement rates, student success on licensing exams;
- **Progress outcome indicators:** number of students completing 12, 24, 48 and 72 semester credits, developmental course completion, number of students who transfer to a four-year institution after completing 12 credits, dual enrollment credit completion;
- **Subgroup outcome indicators:** low-income status, at-risk status, Pell Grant recipients, nontraditional students, first-generation students, minority group identification;
- **High-need subject outcome indicators:** STEM fields, nursing, job placement rates in high-need fields.

Current performance-based measures have moved beyond enrollment and graduation to include transfer, developmental education and STEM-related coursework. Additionally, the formulas may be weighted for marginalized populations, including low-income, adult, and at-risk students. By assigning a weight to certain indicators, policymakers signal the specific importance or additional challenge identified with those particular indicators. For instance, most states provide additional weight for the progress and

“A number of states, including Tennessee, are taking innovative steps to reduce college costs by tying state aid to graduation rates and other measures. But Washington needs to be careful about taking a good idea for one state and forcing all 6,000 institutions of higher education to do the exact same thing, turning Washington into a sort of national school board for our colleges and universities.”
—Senator Lamar Alexander (R-TN)

completion of low-income students within the PBF formula, recognizing the additional barriers these students face when seeking degrees. Weighting certain indicators in the PBF formula is also useful for recognizing the unique features of institutional mission (Miao, 2012).

Contextual Considerations for Community Colleges

Policy makers and other stakeholders are increasingly calling for greater transparency and accountability of higher education (Trettel & Yeager, 2011). Both the Lumina Foundation (through Complete College America) and the Gates Foundation (with Completion by Design) have national goals and initiatives addressing college student success, persistence, and completion. The 2009 strategic plan of the Lumina Foundation has the goal of increasing the percentage of Americans who hold high quality degrees and credentials to 60% by 2025 (Kelderman, 2013). Additionally, President Obama's American Graduation Initiative calls for 5 million additional college graduates by 2020 (Kanter, 2012).

The National Governors Association's Compete to Complete plan recommends outcome and progress metrics to be measured and compared across the states. These metrics include degrees awarded, graduation and transfer rates, enrollment and success in developmental education, retention rates, credits earned, and time and credits to degree (Reyna, 2010). In direct alignment of this national agenda, the state-level PBF model rewards community colleges for improving progression toward completion.

In a recent report from the 21st Century Commission on the Future of Community Colleges, the American Association of Community Colleges (2012) notes that in addition to "student success rates that are unacceptably low," community colleges are "historically underfunded" by funding formulas "that encourage enrollment growth...without adequately supporting that growth, and largely without incentives for promoting student success," (p. viii). The Commission's report identifies a framework for adapting

Outcome Metrics

The outcome metrics quantify the end-product of the educational process, informing policymakers and the public on how students, institutions, and the state are performing on the goal of increased postsecondary attainment.

- Degrees Awarded
- Graduation Rates
- Transfer Rates
- Time and Credits to Degree

Progress Metrics

Progress metrics measure student movement from semester-to-semester and year-to-year toward the completion of an academic program. Such measures help policy makers identify specific challenges and opportunities for improvement in higher education.

- Enrollment in Remediation Education
- Success in Remedial Education
- Success in First Year College Courses
 - Credit Accumulation
 - Retention Rates
 - Course Completion

community colleges to the needs of the 21st-Century, including a shift in focus from access to one on access and success, as well as enhancing decision-making through a culture of evidence. Specifically, the Commission calls for a shift from “funding tied to enrollment” to “funding tied to enrollment, institutional performance, and student success” (AACC, 2012, p. 14).

As community college appropriations are declining (or frozen) in many states and tuition continues to rise, PBF policies can provide an opportunity to tie outcomes to funding. By aligning PBF with the state’s agenda for higher education, legislators may become more committed to avoiding cuts to community college appropriations during tight budget years. This may provide the colleges a greater level of trust in the legislative appropriations process, and greater control over the potential amount of funding received.

Historical Perspective on PBF

Performance-based funding was first introduced to higher education as a funding initiative by the Tennessee Higher Education Commission in 1978. After a slow start, this new policy option quickly spread across the nation, with 26 states utilizing PBF policies at some point by mid-2000 (Harnisch, 2011a; Rabovsky, 2012). Many of these early policies were attached to “new money,” so as the economy declined and state budgets began to be cut, PBF was often among the first programs to be eliminated (Harnisch, 2011a).

What went wrong with early PBF models?

Although PBF models have been in use since 1978, there are distinct differences in the design of current models (often referred to as PBF 2.0) from the early models (now referred to as PBF 1.0). Most models through the early 2000’s emphasized outcomes measures such as completion and transfer, with only minor attention to progress measures, such as retention. Often designed without input from higher education leaders,

1.0 models frequently disregarded institutional goals and mission, and emphasized completion over progression (Dougherty & Reddy, 2011; Miao, 2012). Instead of being a percentage of the base appropriations, PBF 1.0 funding was usually a bonus (often new money) and the first to be cut during budget crunches (Dougherty & Reddy, 2011). Without significant and solid funding attached, many PBF 1.0 models failed to incentivize change for institutions. Many of the 1.0 models faced difficulties and were allowed to lapse (Miao, 2012).

What is PBF 2.0?

In spite of deficiencies with past models of performance-based funding, a renewed interest has been sparked in examining the benefits of tying institutional performance to state appropriations. Seeking to improve upon past models, lawmakers of several states have put forth efforts to research PBF and create updated models to meet the current educational and workforce needs of the state (Harnisch, 2011b).

Often referred to as PBF 2.0, these newer versions seek to improve upon the negative aspects of previous attempts to influence performance at the state level. One key failure of past models was the exclusion of the stakeholders in the planning phases, particularly community college leadership. Thus, an important characteristic of the 2.0 model is a joint planning process by which policymakers and other constituents ensure that the PBF plan aligns with the state’s agenda for higher education, while providing alignment with institutional priorities (Blankenberger, 2011; Miao, 2012; Shulock, 2011).

A key component of current PBF 2.0 models is the alignment with the state’s priorities for higher education. Thus, the state and the community college partner to achieve an improved workforce and economy for the state’s future. Included in the 2.0 model is the acknowledgment of individual institutional mission (Blankenberger, 2011). The goal of PBF 2.0 is not to influence change on a community college’s mission, but instead to incentivize progress toward those components of the institutional mission that

“A core principal of higher education finance is that funding formulas must be systematically aligned with the goals and priorities of the state in order for colleges and universities to have the incentives and resources they need to achieve the targets set for them.”

—Eric Fingerhut, *Former Chancellor of University System of Ohio, August 2010, testimony to the Illinois Higher Education Finance Study Commission.*

institutions to adjust their data collection and reporting processes accordingly and prevents any major funding losses. Some states also include a stop gap, or stop loss, mechanism during the first years, which also prevents major funding losses or colleges falling too far behind in the process (Miao, 2012; Shulock, 2011). We refer to the combination of transition strategies as a “soft landing.”

While previous PBF plans (1.0 models) often limited performance measures to ultimate outputs (graduation or transfer rates), PBF 2.0 models include intermediate measures as well (Blankenberger, 2011; Miao, 2012; Shulock, 2011). These include developmental education completion, progress indicators (such as completion of 12 and 24 credits), and retention indicators (such as fall to spring or fall to fall enrollment). Additionally, PBF 2.0 aims to ensure the continued access and equity of community

align with the state’s priorities and needs (Harnisch, 2011a).

Another component of several PBF 2.0 policies addresses the implementation of the plan, often allowing for a “learning year” in which the indicators are measured and the state provides feedback on the outcomes (Dougherty, Natow, Hare, & Vega, 2010; Miao, 2012). There is no actual funding attached to the indicators during this first year. Whether the PBF plan includes a “learning year” or not, gradual implementation allows

colleges through enhanced incentives for serving at-risk, under-prepared, and other marginalized populations through weighted formulas (Blankenberger, 2011; Miao, 2012; Shulock, 2011). Encouraging performance improvement over time within a community college, instead between colleges, increases the opportunity for closing specific performance gaps (Shulock, 2011).

Just as important as determining and defining the PBF measures, the state must also define the actual funding assigned to the measures; specifically, the percentage to be appropriated, what dollars will be used (new or established) and whether the funding will be in addition to or a portion of the annual base appropriations. While earlier versions of PBF provided a small bonus above the state’s base appropriations, newer versions utilize a percentage of the base to influence performance (Dougherty & Reddy, 2011).

Which States are Utilizing PBF Today?

When examining the status of PBF model implementation across the states, one concludes that the national landscape is in a state of flux; as such, the status report given in Figure 4 is noted to be “a point in time” report. Some states are revamping their PBF to the PBF 2.0 model; others are moving into the PBF policy arena for the first time and having learned from the lessons from other states are incorporating elements of PBF 2.0. Using the National Council of State Legislatures (NCSL) State Activity Table (NCSL, 2013) as a guide, the authors conducted a review of state legislative and higher education agencies and governing board websites, searching for updates and new developments. A draft of an updated PBF State Activity Table was circulated at the 2013 annual summer meeting of the National Council of State Directors of Community Colleges. Table 2 summarizes these results. The authors made every attempt to accurately list sector-specific measures for PBF states, which is why some states have measures for universities, others for community colleges, and others for both sectors.

Based on these various sources, as of August 15, 2013, we conclude that 39 states are active in PBF: 23 states currently have funding formulas in

“States must increase the number of high-quality college graduates within available funding to meet workforce needs and compete globally. To meet the goal, policymakers- including governors and higher education leaders need comprehensive and consistent performance metrics for public campuses and systems to inform policy decisions and pinpoint areas for improvement.”

—NGA Work Group on College Completion Metrics (Reyna, 2010, p. 7)

place which directly relate some portion of the state appropriations to institutional performance: Arizona, Arkansas, Illinois, Indiana, Louisiana, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nevada, New Mexico, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, South Dakota, Tennessee, Texas, Utah, Virginia, and Washington. Six states are transitioning to PBF formulas: Alabama, Colorado, Florida, Montana, North Carolina, and Wyoming, while 10 more states are currently in formal discussions regarding this funding option: California, Georgia, Idaho, Kentucky, Maine, Maryland, New York, South Carolina, Wisconsin and West Virginia. The status of PBF in three states is briefly described below, Tennessee, Washington, and Ohio. These states were chosen for discussion due to their history with PBF, the evolution of the model in their state, and the lessons learned from their implementation with PBF.

Tennessee

Introducing the first PBF system in 1978 (Harnisch, 2011a), Tennessee has the longest running record of PBF efforts but has also revised its model eight times (Sanford & Hunter, 2011). Prior to 2010, PBF held for only a small portion of the total state appropriations (ranging from 2%-5.45% of the base), while the bulk of the funding continued to be allocated on institutional enrollment (Dougherty & Reddy, 2011; Harnisch, 2011a). Examining Tennessee's retention and graduation rates, Sanford and Hunter (2011) found that PBF did not result in improved outcomes at the public four-year universities; additionally, they found that increasing the funds tied to performance from 2% to 5% did not result in any further improvements in performance. In a separate study of PBF in Tennessee, Bogue and Johnson (2010) found a slight uptick in graduation rates in the two- and four-year higher education institutions. These results may have led legislators to recognize as Miao (2012) did that PBF amounts must be significant enough to incentivize efforts for improved outcomes. Tennessee has recently taken a bold step towards a complete outcome-based system, foregoing enrollment as a measurement

for funding altogether.

Tennessee's PBF model provides a distinct example of the 2.0 model through the use of stakeholder collaboration, institutional mission acknowledgment, alignment with state priorities, measuring progress and completion, and the use of stable funding through base appropriations. Utilizing separate formulas to recognize differing missions, the state's universities and community colleges report on slightly different performance indicators. The university indicators include credit accumulation, degree completion, research and grant funding, transfers out, and six-year graduation rate. The community college indicators include credit accumulation, dual enrolled students, degree completion, job placement, developmental education progression, transfers out, and workforce training (Dougherty & Reddy, 2011; NCSL, 2013). Additionally, nontraditional and low-income students are more heavily weighted within the formula (NCSL, 2013). With 100% of state appropriations soon to be dependent upon performance (NCSL, 2013), Tennessee's institutions are responding with strategies to improve retention and completion, including additional advisors, increased tutoring and developmental courses, and fast-track courses and programs (Harnisch, 2011a).

Washington

After a short three-year stint, Washington state legislators allowed their first PBF system to lapse in 1999. Their first system utilized separate groups of indicators for the universities and the community colleges, and awarded a small percentage of the base state appropriations that was held back and reassigned as PBF (Dougherty & Reddy, 2011).

The state's current PBF system combines 1.0 and 2.0 model practices for a performance set-aside system called "Achievement Points" (Harnisch, 2011a) under the Student Achievement Initiative established in 2007 by the State Board for Community and Technical Colleges (Dougherty & Reddy, 2011). Utilizing new money, the system incentivizes certain outcomes by awarding additional funding "based on their accumulation of momentum points," (NCSL, 2013, para.

32). These are earned through several indicators, including basic skills and developmental education, credit accumulation, college-level math course completion, apprenticeship training, and degree and certificate completion (Albright, 2009; Dougherty & Reddy, 2011; NCSL, 2013). Incorporated into the system was a learning year, which allowed the community colleges the opportunity to examine their performance the first year without attached funding (Dougherty & Reddy, 2011). Although Washington uses a bonus funding model (1.0), the state has incorporated 2.0 model practices with the measurement of both progress and completion, as well as the learning year during the initial stage. Since its establishment in 2007, this PBF model appears to have increased performance in each of the indicator categories (Harnisch, 2011a).

Ohio

Ohio introduced separate 1.0 PBF models for the public universities and community colleges in 1995, each of which awarded a small bonus for transfer and completion rates. Beginning in 2010, state legislation began phasing in a new system for PBF by incorporating 2.0 model practices, effectively ending enrollment-based funding for the universities (Dougherty & Reddy, 2011, NCSL, 2013). The current university PBF model awards 100% of the state appropriations based on course and degree completion, with the degree component being phased in over the course of several years. This funding is weighted for the cost of programs and low-income students (Albright, 2009; Dougherty & Reddy, 2011). Beginning in 2011, community colleges received up to 5% of their state appropriations through the new PBF model; this amount is gradually being increased each year to 30% of the total appropriations by fiscal year 2015 (Dougherty & Reddy, 2011). The community college performance indicators include progression through a sequence of developmental coursework to college credit coursework, accumulation of credits, degree completion, and transfers to four-year institutions. Both PBF models include a stop-loss provision to prevent any institution losing more than 1% of their base funding, however this will eventually be phased out (NCSL, 2013).

Does PBF Work?

Although PBF models have been utilized in some form for the past 30 years, there are mixed reviews on their success. While little research has been completed on the overall effects of current PBF models, there have been several observations (e.g., Bogue & Johnson, 2010; Sanford & Hunter, 2011). These early results (Dougherty & Reddy, 2011; Harnisch, 2011a) propose multiple benefits to the individual student, the college, and the state, including:

- Increased awareness and alignment of the institutional mission and goals with the state's agenda and expectations;
- Increased college self-awareness of actual outcomes (both intermediate and ultimate);
- Increased healthy competition between colleges based on publication of outcome measures;
- Increased use of data during institutional planning and decision making.

Disadvantages of PBF models include the possibility that the chosen indicators measure only a portion of the entire institutional picture, and that the potential exists for negative effects on institutional quality, access, equity, mission, or stability (Harnisch, 2011a). In fact, the California nonpartisan Legislative Analyst's Office reviewed a recent PBF proposal to fund community colleges based on course completion and noted their concern that the governor's proposal to move the census date could consequently result in grade inflation or jeopardize course rigor, recommending instead the development of a model that balances both access and success (LAO, 2013). Additionally, college and university leaders in Texas have expressed concern that PBF models may cause an additional loss of funds, as well as disregard institution-specific factors, such as student populations (Cardona, 2013).

While PBF 2.0 considers improvement within intermediate outcomes, the ultimate goal of this funding model is to increase the number of college graduates with the qualifications to address current workforce needs within the state. However, the current literature reflects a strong perspective that without significant state dollars committed to PBF,

there will be little direct impact on the ultimate desired outcome of increased graduation rates (Rabovsky, 2012).

Lessons Learned

Several points are important for consideration when designing PBF models for higher education: the relationship between PBF and strategic planning for institutional and state-level futures, the importance of the use of benchmarks, the involvement of stakeholders in development, and the use of an oversight office or agency for evaluation (Melkers & Willoughby, 1998). Additionally, the dollars attached to PBF must be sufficient to incentivize institutions (Miao, 2012). The lessons learned from early PBF1.0 models will impact the design and success of the 2.0 model, as well as help alleviate concerns of colleges and universities.

Community college leaders in several states with PBF appear supportive of the system (Dougherty et al, 2010); however, this may be attributed to their need for additional state funding and acceptance of processes for new funding streams. While state officials are most often the proponents of PBF options (Dougherty et al., 2010), significant involvement from institutions will ensure their unique perspective and needs are represented in the model, and that the chosen indicators will accurately reflect performance and improvement (Harnisch, 2011a; Miao, 2012; Shulock, 2011). An important factor in planning and designing the PBF system includes input from the various stakeholders (Dougherty et al., 2010; Harnisch, 2011a; Miao, 2012; NCSL, 2013; WHECB, 2011). The design process should involve policymakers, higher education leaders, faculty, business leaders, education organizations and others who may have a vested interest in higher education productivity and finance reform. To ensure continued equity and access to higher education, Dougherty et al. (2010) also suggest the inclusion of minority and social-equality groups during the planning process.

Extremely important is the alignment of the PBF system with the state's goals and agenda for higher education with the state's workforce

and economic development priorities (Harnisch, 2011a; Miao, 2012; WHECB, 2011). Without guidance on the vision of the state and its workforce and economic development needs, public higher education cannot truly serve as a tool for the state to advance on its goals. Successful PBF models measure performance indicators related to the goals of the institution, which in turn support the state's public agenda (Harnisch, 2011a; Shulock, 2011). Blankenberger (2011) notes that at the core of its purpose, PBF "rewards institutions that meet state goals," (slide 12).

Institutional mission and characteristics should be taken into account within the PBF model (Harnisch, 2011a; Miao, 2012; NCSL, 2013; WHECB, 2011). Utilizing different performance measures for certain institutions will prevent PBF from hindering or altering the mission, access or equity of a college or university. In particular, community colleges and four-year universities have distinctly different missions and goals. PBF formulas and the indicators selected to measure performance and improvement must accurately represent each institutional type. Additionally, the funding formula should reward institutional improvement, rather than only the top achievers and avoid statewide competition for funding (Blankenberger, 2011; Shulock, 2011).

Simple and clear performance indicators measuring access, progression, and completion should be utilized within the PBF model to ensure clarity and understanding of the expectations (Harnisch, 2011a; Miao, 2012; WHECB, 2011). Additionally, the PBF formula should include weighting for marginalized populations, by providing incentives for progression and completion by academically and/or financially at-risk students. This ensures continued access and equity (Blankenberger, 2011; Shulock, 2011; WHECB, 2011). Finally, a key component of current, successful PBF models is the inclusion of both progression (retention) and completion indicators.

Very important to the success of PBF systems is the commitment of stable funding streams, with enough dollars to create significant interest for change (Harnisch, 2011a; Miao, 2012; Rabovsky,

2012; WHECB, 2011). A recent study examined the effectiveness of PBF policies on institutional spending, finding minimal change attributed to these policies (Rabovsky, 2012). Referring to the casual logic of PBF, Rabovsky (2012) examined whether institutions responded to funding incentives with new spending practices aimed at improving retention and completion. Interestingly, Rabovsky (2012) noted that the minimal level of influence discovered at the institutional level may, in fact, be attributed to the small percentage of state appropriations most PBF models currently utilize. There exists “the potential for these policies to have considerable effects on administrative behavior if policymakers could more effectively tie larger incentives to institutional performance,” (Rabovsky, 2012, p. 694). As such, state funding dollars designated as PBF provide an incentive for improvement when they are provided as additional funds, beyond the yearly appropriation. Additionally, these funds should be solid, with a low risk of being reduced or removed in future years. The threat of impending reduction only serves to elicit distrust from the colleges and universities and hinders the intentions of measuring and encouraging increased effectiveness.

A great concern of institutions facing new PBF systems is the possibility of dramatic losses of funding during the initial years. This concern can be put at ease by gradually phasing in the new system over a few years and by incorporating a stop-loss gap provision (Miao, 2012; Shurlock, 2011), through the “soft landing” philosophy. The assurance that funding will not drop below a certain percentage can provide some positive light on the new PBF system. Additionally, by utilizing the first year as a learning year, institutions will have the opportunity to examine their actual performance outcomes and begin making changes before funding is at stake (Harnisch, 2011a; Miao, 2012).

Finally, the PBF system should be continuously evaluated for success and improvement (Harnisch, 2011a; Miao, 2012). Certain factors may influence the continuous improvement of particular measures, causing the need to modify or change the use of those indicators within the formula. Simi-

larly, an institution may begin adapting its practices to meet performance requirements, while inadvertently creating negative effects on students. These are both examples of the need for continuous monitoring and evaluation of PBF systems, as well as the need for flexibility.

Conclusion

The prevalence of performance-based funding models has increased recently, in conjunction with the national college completion agenda and the unfortunate decline in state appropriations. It is important to note that PBF *is not* the answer to the larger issue of declining support and funding for higher education, and thus should not be used to meet the greater funding issues of higher education. While there is not compelling evidence of the link between PBF and improved student outcomes at this time, states that are considering PBF should at least consider the following:

Policy Recommendations

1. Engage stakeholders in the discussion and planning, including legislators, college leaders and business and industry representatives;
2. Align the measures of the PBF model with state goals, particularly workforce and economic development goals;
3. Allow for the differentiation of institutional missions;
4. Plan to phase in the new PBF model and funding, and include a “soft landing” (i.e., learning year) for measurement only;
5. Commit significant state dollars to incentivize the PBF system;
6. Include both outcome and progress performance measures.
7. Continuously evaluate the PBF System.

As an alternative to incremental increases in enrollment-driven funding, a PBF model provides an opportunity for increased accountability for ensuring quality and meeting state needs. State legislators considering PBF are advised to study its limitations, advantages and disadvantages, and to consider the lessons learned from the states that have implemented PBF. ■

References

- AASCU State Relations and Policy Analysis Team. (2013). *Top 10 higher education state policy issues for 2013*. Washington, DC: American Association of State Colleges and Universities.
- Albright, B. N. (2009). *Higher education performance funding 2.0 tip sheet*. Lumina Foundation for Education.
- American Association of Community Colleges. (2012). *Reclaiming the American dream: A report from the 21st-century commission on the future of community colleges*. Washington, DC: Author. Retrieved from <http://www.aacc.nche.edu/21st-CenturyReport>
- Blankenberger, B. (2011). *Performance-based funding and higher education institutions in the state of Illinois*. Presented at the Illinois Association of Institutional Research Conference, November 2011.
- Bogue, E., & Johnson, B (2010). Performance incentives and public college accountability in the United States: A quarter century policy audit. *Higher Education Management and Policy*, 22(2), 9-30.
- Cardona, C. (2013, January 28). Presidents of Texas universities warn against tying funds to graduation rates. *The Dallas Morning News - Austin Bureau*. Retrieved from www.dallasnews.com
- Community College News Now. (2013, February 11). Should community colleges be paid only for students who complete courses? Retrieved from <http://www.ccnewsnow.com/should-community-colleges-be-paid-only-for-students-who-complete-courses/>
- Dougherty, K. J., & Hong, E. (2005). *State systems of performance accountability for community colleges: Impacts and lessons for policymakers* (An Achieving the Dream policy brief). Boston, MA: Jobs for the Future.
- Dougherty, K. J., & Reddy, V. (2011). *The impacts of state performance funding systems on higher education institutions: Research literature review and policy recommendations* (Community College Research Center Working Paper No. 37). Retrieved from <http://www.ccrctc.columbia.edu/Publication.asp?UID=1004>
- Dougherty, K. J., Natow, R. S., Hare, R. J. & Vega, B. E. (2010). *The political origins of higher education performance funding in six states* (Community College Research Center Brief No. 47). New York, NY: Community College Research Center.
- Harnisch, T. L. (2011a). *Performance-based funding: A re-emerging strategy in public higher education financing*. Washington, D.C.: American Association of State Colleges and Universities. Retrieved from http://www.aascu.org/uploadedFiles/AASCU/Content/Root/PolicyAndAdvocacy/PolicyPublications/Performance_Funding_AASCU_June2011.pdf
- Harnisch, T. L. (2011b). *Performance-based funding (PBF): A re-emerging approach to boosting institutional outcomes*. Presented at the 2011 Higher Education Government Relations Conference, San Diego, CA, December 2011.
- Kanter, M. (2012, April 12). *An America built to last* (PowerPoint). Remarks of the Undersecretary for Postsecondary Education to the National Council of State Directors of Community Colleges, Spring 2012 meeting, Orlando, FL.
- Kelderman, E. (2013, January 13). Lumina Foundation adopts new tactics to reach college-completion goal. *The Chronicle of Higher Education*, Retrieved from <http://chronicle.com/article/Lumina-Foundation-Adopts-New/136551/>
- Legislative Analyst's Office. (2013, February 12). The 13-14 Budget: Analysis of the Higher Education Budget. Sacramento, CA: Author.
- Melkers, J., & Willoughby, K. (1998). The state of the States: Performance-based budgeting requirements in 47 out of 50. *Public Administration Review*, 58(1), 66-73.
- Miao, K. (2012). *Performance-based funding of higher education: A detailed look at best practices in 6 states*. Washington, DC: Center for American Progress. Retrieved from <http://www.americanprogress.org/issues/higher-education/report/2012/08/07/12036/performance-based-funding-of-higher-education/>
- Mortenson, T. G. (2010). Trends in financial barriers to higher education by parental income and institutional type/control: 1990 to 2008. *Postsecondary Education OPPORTUNITY* (No. 211). Oskaloosa, IA: Postsecondary Education OPPORTUNITY.
- National Conference of State Legislatures (NCSL) (2013). *Performance funding for higher education*. Retrieved from <http://www.ncsl.org/issues-research/educ/performance-funding.aspx>
- National Governors Association and the National Association of State Budget Officers (2012). *The fiscal survey of the states, an update of fiscal conditions*. Retrieved from <http://www.nasbo.org/publications-data/fiscal-survey-state/fiscal-survey-states-fall-2012>
- New Mexico Higher Education De-

- partment. (2011). *The Watson-Hadwiger formula*. Retrieved from <http://www.ncsl.org/issues-research/educ/performance-funding.aspx>
- Obama, B. (2009, July 14). *Remarks by the President on the American Graduation Initiative, Macomb Community College, Warren, MI*. Washington, DC: The White House, Office of the Press Secretary. Retrieved from http://www.whitehouse.gov/the_press_office/Remarks-by-the-President-on-the-American-Graduation-Initiative-in-Warren-MI
- OECD (2011). *Education at a Glance 2011: OECD Indicators*. OECD Publishing. <http://dx.doi.org/10.1787/eag-2011-en>
- Pfeffer, J., & Salancik, G. (1978). *The external control of organizations: A resource dependence perspective*. New York, NY: Harper and Row.
- Rabovsky, T. M. (2012). Accountability in higher education: Exploring impacts on state budgets and institutional spending patterns. *Journal of Public Administration Research and Theory*, 22, 675-700. doi:10.1093/jopart/mur069
- Reyna, R. (2010). *Complete to complete: Common college completion metrics*. Washington, DC: National Governors Association Center for Best Practices. Retrieved from www.nga.org/center
- Sanford, T., & Hunter, J. (2001). Impact of performance-funding on retention and graduation rates. *Education Policy Analysis Archives*, 19(33), 1-30.
- Shulock, N. (2011). *Concerns about performance-based funding and ways that states are addressing the concerns* (Institute for Higher Education Leadership & Policy Brief). Sacramento, CA: California State University-Sacramento.
- Trettel, B. S., & Yeager, J. L. (2011). Linking strategic planning, priorities, resource allocation, and assessment. In S. E. Sutin, D. Derrico, R. L. Raby, & E. J. Valeau (Eds.), *Increasing effectiveness of the community college financial model* (pp. 80-94). New York, NY: Palgrave Macmillan.
- Washington Higher Education Coordinating Board (WHECB). 2011. *Performance-based funding* (Policy brief). Olympia, WA: Author.
- Alexander, L. (2013, August 22). Alexander Statement on the President's Higher Education Proposal. Washington, D.C., author. Retrieved at http://www.alexander.senate.gov/public/index.cfm?p=PressReleases&ContentRecord_id=79e52b49-86ff-481d-aeaa-d7c77b412709
- Adams, C. (2013, August 23). *Administration's College Affordability Ideas Trigger Reaction*. *Education Week*. Retrieved at http://blogs.edweek.org/edweek/college_bound/2013/08/administrations_college_affordability_ideas_triggers_range_of_reaction.html
- Obama, B. (2013, August 22). *Remarks by the President on College Affordability--Buffalo, NY*. Washington, D.C.: The White House, Office of the Press Secretary. Retrieved at <http://www.whitehouse.gov/the-press-office/2013/08/22/remarks-president-college-affordability-buffalo-ny>

Table 2. State Activity Details on Performance Funding for Higher Education

State	Status	Amount of Performance Based Funding	Metrics
Alabama	In transition		
Arizona	In place 2012 SB1530	FY2013: \$5 million of existing dollars expected to be reallocated by the Board of Regents based on performance metrics	Public universities: - Degree completion - Credit hour completion - Research and public service funding - STEM and other high-need fields are weighted

Arkansas	In place 2011 Act 1203	Begins with 5% in 2013-2014 school year, and increases in 5% increments until capped at 25% during the 2018-2019 school year	Separate, yet similar formulas for community colleges and universities: • 40% of performance funding: • Total credentials awarded • Bachelor credentials awarded • STEM production • Student progression 60% of performance funding: • Optional measures selected by each institution
California	Formal discussions 2013 SB 195		Legislators are currently in discussion and have recommended a working group to design performance metrics to include: • Graduation rates • Transfer rates • Degree completion • Low-income degree completion • Developmental education • Retention rates • Course completions • Total funding per degree or certificate • Degree completion in relation to state needs
Colorado	In transition 2011 SB 52	Begins no earlier than FY 2016-2017; 25% of the General Fund appropriation that exceeds \$650 million in total higher education operating appropriations; performance funding implemented only when total state higher education General Fund appropriations reach at least \$706 million	The metrics are still under development with the following goals: • Increase attainment • Improve student success • Diversify enrollment and reduce attainment gaps • Restore balance in postsecondary revenues and maintain productivity
Florida	In transition Chapter 2013-27		The metrics are under development with the goals of increasing graduation and employment rates in targeted program areas, and increasing the number of industry certifications
Georgia	Formal discussions		
Idaho	Formal discussions		
Illinois	In place 2011 HB 1503	Less than 1% in FY2013; may grow in future years	Public universities: • Degree completion • Amount of money spent on each degree • Bonuses for low-income and minority students, and for STEM degrees Community colleges also have a system, but theirs is based more on enrollment

Indiana	In place CHE Higher Ed Budget recommendations for 2013-15	5% in FY2011-FY2013; projected to be 6% in FY2014 and 7% in FY2015	Institutions evaluated against the same benchmarks regardless of size or mission: • Overall degree attainment • On-time degree attainment • Low-income degree attainment • Credit hour completion • Dual-credit completion • “Early college” credit hour completion • University research improvement
Kentucky	Formal discussions		
Louisiana	In place 2010 GRAD Act	15% of total state budget allocation	• Graduation rate and graduation productivity goals consistent with institutional peers • Program completion
Maine	Formal discussions		Currently developing recommendations on performance funding metrics and strategy
Maryland	Formal discussions		NCSL participated in discussions on performance funding with Maryland legislators and legislative staff in 2011 and 2012
Massachusetts	In place 2013 HB 3538	\$7.5 million in FY2014 (\$5 million for community colleges, \$2.5 million for public universities)	Community colleges and public universities: • College participation • College completion • Student learning • Workforce alignment • Preparing citizens • Closing achievement gaps • Operational efficiency
Michigan	In place House Bill 5372	3% under FY 2012-2013 enacted budget (8.5 million for community colleges)	Public universities: • Graduation rates • Number of degrees awarded in STEM and other critical area fields • Research and development expenditures • Includes an incentive for universities to not increase tuition by more than four percent • To be eligible for performance funding, universities must participate in the state’s student transfer network, have reverse transfer agreements in place with at least three community colleges, and accept dual enrollment credits Community colleges (% of funding awarded): • Across the board improvement (50%) • Degree completion (17.5%) • Local strategic value (15%) • Contact hour equated students (10%) • Administrative costs (7.5%)

Minnesota	In place 2013 SF 1236	5% of total appropriations	Community colleges and public universities: • Graduation rate or degrees, diplomas & certificates conferred • Persistence and completion rate • Related employment rate • Reduce student expenses through the use of Open Educational Resources (OER) tools and services • Reallocation of funds from expense realignment
Mississippi	In place 2013 SB2851	As of FY2014, 100% of public university appropriations based on performance; a stop-loss is in place for first years of the transition	Public universities: • Retention rate • Undergraduate graduation rate • Diversity of faculty • Research/public service • Expenditures
Missouri	In place CBHE 2012 Report	Approximately 2-3% (to be in place by FY2014)	Metrics vary by institutional sector and focus on the following areas: • Student success/progress: (a) completion rates; (b) retention rates; (c) completion of developmental and first credit-bearing course; (d) credit accumulation • Degree attainment: (a) total degrees awarded; (b) graduation rates • Quality: (a) job placement; (b) licensure/certification exam results and pass rates; (c) assessment results in major field, general education • Financial responsibility/efficiency: (a) share of E&G spending on core mission; (b) revenue growth per FTE student; (c) completed credit hours per \$100,000 of state appropriations or E&G spending
Montana	In transition 2013 SJ0013	An additional 5% (\$7.5 million) on top of the total general fund appropriation available in 2014-2015 academic year	Metrics for the initial pilot year will include: • Annual number of undergraduate degrees and certificates awarded • Percentage of 1st-time, full-time freshmen returning for a second year of enrollment Long-range plans for future potential allocations would include mission differentiation
Nevada	In place 2013 AB 507	5% of base appropriations in FY2015 (FY2013 performance); growing to 20% by FY2018; \$18,926,196 has been set aside for performance funding pool for FY2014-2015	Community colleges and public universities: • Certificate and degree completion • Transfer • Increased success with underserved populations

New Mexico	In place LFC Hearing Brief	5%	Public universities: • Course completion rate; • Number of certificates and degrees awarded • Number of certificates and degrees awarded in state workforce priority areas • Number of certificates and degrees earned by financially at-risk students
New York	Formal discussions		The State University of New York is leading a task force on developing recommendations
North Carolina	In transition SL 2012-142 Section 8.5	Up to 2% of previous year's General Fund appropriations; additional funds as available for exceeding performance on all eight measures; measurement in FY2013 and funding in FY2014	State Board of Community Colleges: • Basic Skills Student Progress • Developmental Student Success Rate in College-Level English Courses • First Year Progression • Licensure and Certification Passing Rate • GED Diploma Passing Rate • Developmental Student Success Rate in College-Level Math Courses • Curriculum Student Completion • College Transfer Performance
North Dakota	In place 2013 SB2200	Moving from enrollment-based model; in FY2013, general fund appropriations will be based on credits completed; additional \$5 million available through TBD performance measures	Community Colleges and public universities: • Credit completion • Credits are weighted by level and in relation to state work force needs
Ohio	In place <u>Section 371.20.80</u>	Universities: all instructional funding on course completions instead of enrollments; degree completions being phased in (began in 2010) Community colleges: 5% of funding based on Success Points; 95% based on FTE enrollment (began in 2011)	At-risk students are more heavily weighted in formula, and there is a STEM course incentive Public universities: • Course and degree completion Community colleges: • Progression from remedial to college level courses • Students earning 15 and 30 college level credits • Students earning an associate degree • Completion of 15 hours and transfers to four-year institutions
Oklahoma	In place Revised Performance-Funding Formula	Small percentage of the overall budget for higher education; in 2008, performance-based funding averaged \$2.2 million a year; Board of Regents in April 2012 approved revised and expanded funding formula for new dollars or any funding the system receives beyond its current base	Campus degree completion plan • Retention rates • Pell Grant retention rates • 24-credit-hour completion rate • Graduation rate • CCA degree target achievement • Number of certificates/ degrees conferred • Program accreditation

Oregon	In place 2011 SB242		A public university may request additional appropriations through a performance compact
Pennsylvania	In place Allocation Formula	2.4%	Public universities: Mandatory • Student success: degrees conferred and closing achievement gap • Access: close access gap and faculty diversity • Stewardship: private support dollars raised Optional (choose any 5 metrics from the following categories) • Success: deep learning scale results, senior survey, student persistence, value added, and STEM degrees • Access: faculty career advancement, employment diversity, student experience with diversity, and student diversity • Stewardship: facilities investment, admin. expenditures as a % of educational costs, faculty productivity, and employee productivity • University-specific: may create no more than 2 indicators
South Carolina	Formal discussions S 0266 (2013-2014)	To begin FY2016, annual appropriations will be distributed through an accountability-based model. A five-year transition period will be incorporated.	Metrics for public universities are under development, to include: • Completion • Affordability and access • Educational quality • Economic development and institutional mission Community and technical colleges are exempt.
South Dakota	In place Senate Bill 5	\$6 million	After a one-time performance funding pilot for public universities based on three years of degree production data, with more funding for producing graduates in high-priority fields, 2013 legislation provides the framework for performance funding and the creation of the Council on Higher Education Policy Goals, Performance, and Accountability
Tennessee	In place Complete College TN Act of 2010	100%	Public universities: • Students accumulating: 24, 48, and 72 hours • Bachelor's, master's, doctoral, and law degrees • Research/grant funding • Transfers out with 12 hours • Degrees per 100 full-time equivalent (FTE) • Six-year graduation rate Community Colleges: • Student accumulating: 12, 24, and 36 hours • Dual enrolled students

			• Associate degrees, 1-2 certificates & less than 1 year certificates • Graduates placed in jobs • Remedial and development success • Transfers out with 12 credit hours • Workforce training (contact hours) • Award per 100 FTEs
Texas	In place 2013 SB 1	10%	Community/junior colleges: • Developmental education • Gateway courses • College credit hour attainment • Credentials awarded • Transfers to a four-year Institution
Utah	In place 2011 Senate Bill 97		Senate Bill 97 establishes “mission based funding” as a basis for higher education appropriations in Utah instead of funding institutions based solely on enrollment growth; mission-based funding will consider both enrollment growth and the strategic priorities for colleges and universities. As appropriations are available, community colleges and public universities submit proposals for high impact initiatives to be reviewed and approved by the Board of Regents. Accountability reports demonstrate the impact of the funded initiatives.
Virginia	In place Virginia Higher Education Opportunity Act of 2011		Public universities and community colleges: • Increased enrollment • Increased degree completion • Improved retention and graduation rates • Increased research output • Increased degree production in STEM fields
			• Increased efficiency gains through: • Year-round use of campus facilities • Online courses • Resource sharing • Better use of technology
Washington	In place Student Achievement Initiative	2013-2015: approved \$10.5 million	Community and technical colleges: • Building college level skills: adult literacy/ English language proficiency test score gains, GED or H.S. diploma, and passing pre-college writing or math • First-year retention: earning 15 and 30 college level credits • Completing college level math: passing courses required for technical or academic associate degrees • Completions: certificates, associate degrees, and apprenticeship training

West Virginia	Formal discussions		
Wisconsin	Formal discussions		
Wyoming	In transition 2009 HB 114	2015-16: \$14.3 million	Self-study has been completed; performance metrics are now being established, likely to include: • Completion of diplomas and high-level certificates • Time to degree • Remedial education

The PBF State Activity Table is based on the February 2013 version developed by the National Conference of State Legislatures (NCSL) and has been modified and included with permission from NCSL: <http://www.ncsl.org/issues-research/educ/performance-funding.aspx> The current table includes updates by the authors from the state legislative websites, websites of state higher education agencies and governing boards, and community college state directors in attendance at the annual summer meeting of the National Council of State Directors of Community Colleges, July 28-31, 2013, Big Sky, MT.

About the Education Policy Center at The University of Alabama

The Education Policy Center provides policy-related analyses in support of access, equity, and economic and community development to the benefit of our public schools, community and technical colleges, and four-year colleges and universities. The Center accomplishes its work through a dynamic research and policy agenda that, through active dissemination, seeks to inform and improve policy-making and practice at the national, state and local levels. Our coordinated program of basic and applied research deploys our extensive background in historical and topical analyses of education-related issues to the benefit of education practitioners and policy-makers in the State of Alabama, the South, and the nation. Stephen G. Katsinas is director of the Center; his research interests are in higher education and State and Federal policy, and access and finance issues for both two- and four-year institutions. Associate director Wayne Urban, a historian of elementary and secondary education in the U.S., recently authored the book *More Science or Sputnik: The National Defense Education Act of 1958*, and has written about *No Child Left Behind* and charter schools. The Center hosts The University of Alabama's Superintendents Academy under the leadership of Richard L. Rice Jr. The Center's work is assisted by Senior Fellows Vincent A. Lacey, Frank R. Mensel, Mary Allen Jolley, David S. Murphy, James E. "Skip" Dotherow, Michael A. Kennamer, Kristie R. Rankin, John Petrovic; and E.P.C. Research Associates Michael S. Malley Jr., Jon P. Koh, J. Lucas Adair, Anna Ramia, Undre Phillips, Aubrey Stewart, Nelson Tidwell, Phillip D. Grant, and R. Matthew DeMonBrun, Ph.D. Student, Higher Education, University of Michigan.

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