DRIVING BETTER OUTCOMES:

TYPOLOGY AND PRINCIPLES TO INFORM OUTCOMES-BASED FUNDING MODELS

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OVERVIEW AND BACKGROUND

Tying funding to successful outcomes is a concept with inherent appeal, particularly so when tight budgets demand heightened efficiency and impact for each dollar. Today's fiscal climate and economic need for expanded postsecondary access and completion have fueled a resurgence of interest in and state action regarding performance funding policies, which tie a portion of state appropriations to metrics that gauge institutional performance on various indicators.

Over the past 35 years, more than half of the states adopted a form of postsecondary performance funding in an effort to match higher education dollars with sought-after outcomes. Most of these efforts were abandoned, falling victim to poor design, rushed implementation or budget cuts. But these early models established an important foundation for research and understanding that has informed development of more recent policies and models that incorporate best practices and lessons learned. These new models have expanded rapidly over the past three years; today more than two-thirds of states are developing and/or implementing outcomes-based funding (OBF) policies of varying construct, and a number of other states are interested.

Public finance literature undergirds the idea that incentives and alignment to objectives matter. However, how to best translate the concept into effective finance policies and models for higher education remains unresolved. This paper and the analysis within are a first effort to distinguish between various state OBF policies based on key elements they address and the level of funding they command. The state OBF policy typology described is not a ranking or rating system. Rather, it is a way of objectively gauging the continuing evolution of state OBF policies and assessing the degree to which they incorporate best practices identified by research and the experience of leading states. The aim of this classification effort is to help inform policymakers, stakeholders and researchers by furthering the development, improvement and analysis of postsecondary funding policies that incent and yield the best outcomes for students.

> *"The new funding models reflect the needs of the state and citizens, not merely the needs of the institution."*
>
> MARY McKEOWN-MOAK AND CHRISTOPHER MULLIN

HIGHER EDUCATION FINANCE

Public postsecondary institutions have numerous revenue streams, but there are three primary funding sources:

- Tuition paid by students;
- Financial aid in the form of federal and state student loans and grants; and
- Institutional aid from states and localities to support institutions' operating expenses.

States largely base institutional allocation on inputs—without regard to performance—using one of two allocation methods: historic (base-plus) and/or enrollment-based allocations. Historic allocations are based upon previous funding, adjusted upward or downward to reflect current resources, and aim for institutional fiscal stability even at the expense of equity. (Longstanding institutions sometimes account for a disproportionately greater share of funding simply because of precedent.) Enrollment-based allocations are tied to the number of students enrolled at a census date, typically within the first few weeks of the term. This type of allocation rewards expanded access to higher education but does not incent program/degree *completion*—one of today's most pressing policy challenges. It should also be noted that along with both of these common institutional allocation methods, tuition and financial aid policies also provide a strong incentive to *enroll* students. Holistically, many state higher education finance structures are directly tied to a student's enrollment and provide little financial incentive for institutions to help students complete degrees as efficiently as possible (though time limits on federal and state student aid provide an eventual end point for some).

CAUSE FOR CONCERN

The United States trails 11 countries in educational attainment for 25- to 34-year-olds.[i] And according to *The American Dream 2.0* coalition report, our nation is facing a college completion crisis, with 46 percent of students failing to graduate within six years and an even bleaker outlook for minorities (63 percent of African American students and 58 percent of Hispanic students do not graduate on time).[ii] Students who drop out of college not only lose time and money but also earn less than graduates and are four times more likely to default on their student loans.[iii] College dropouts cost taxpayers[1] more than $9 billion at four-year universities and almost $4 billion at two-year colleges.[iv] Add in a looming shortage of skilled workers to fill jobs and the rising cost of college, and it's easy to see why state policymakers are seeking stronger policy options that better promote college completion.

1 Figures cited are cumulative costs of first-year dropouts over five years, according to Complete College America citation of American Institutes for Research study.

States are increasingly adopting outcomes-based funding policies to supplement or replace historic and enrollment-based institutional allocation methods, both to better leverage existing resources and to spur improvements in student outcomes and institutional efficiency.

LEADING TO OUTCOMES: THE PROGRESSION OF PERFORMANCE FUNDING POLICIES

"Performance funding" refers to a broad set of policies linking allocation of resources to accomplishment of certain desired outcomes.[v] Historically, postsecondary performance funding models were often add-ons or bonuses to base allocations that institutions earned for meeting various goals or benchmarks. In many cases, while laudable, these goals and benchmarks were too broad to be meaningful, or not explicitly tied to a state's completion needs or attainment goals. Performance funding goals and related metrics ranged from increased access for certain populations to diversity in faculty and higher expenditures on research. In cases where completion was a focus, the commonly used measure was graduation rate, a measure with high variability and dependence on student preparation levels.

Early performance funding policies were hampered by a number of design and implementation flaws. In many cases, the policies were designed in a top-down approach by legislators or policy leaders with little or no input from institutions, generating a lack of commitment to the policy as well as one-size-fits-all models that reflected limited knowledge of institutional differences and the role each type of institution serves within a broader system of higher education. This non-differentiation led some institutions to modify their behavior in counterproductive ways to boost their numerical performance on selected metrics (such as limiting access to increase graduation rates). Metrics used to measure success were sometimes vague or based on unreliable data, and they corresponded to multiple, often conflicting priorities (e.g., increased access and increased selectivity) that did not provide a clear indication of what the funding model was supporting institutions to achieve. As a result, funding systems were complicated and burdensome.

As noted above, performance funding was generally awarded as a bonus, which was often the first to be cut in tough budget environments. Even when performance funding was included within the general allocation to institutions, the dedicated amount was a small percentage of overall funding. Institutions had limited reason to alter practice or behavior, which translated to uneven knowledge of performance funding across and within colleges.

In states such as South Carolina, where a more significant amount of funding was associated with performance, the model was poorly designed (developed top-down by policymakers with no differentiation between institutional mission, numerous and complicated metrics, and limited data reliability). It also was implemented in a way that led to large shifts in funding over short periods of time—a difficulty for institutions accustomed to budget stability. These challenges meant there was little commitment to the policies, which were easily abandoned as policy supporters left or budget circumstances changed.

THE NEXT PHASE: OUTCOMES-BASED FUNDING

An evolved form of performance funding, OBF similarly seeks to incent and reward progress toward a set of stated goals, but is distinct from performance funding models in both design and implementation—primarily because of its more explicit connection with state needs, focus on student completion, and refined development and modeling approaches. In varying degrees, current OBF models address many of the challenges presented by early performance funding plans and "reflect the needs of the state and citizens, not merely the institution."[vi]

Objectives of OBF include:

- Align state higher education funding method with the state's higher education attainment goals and student success priorities;
- Align institutional priorities with those of the state and support the scaling of proven student success practices; and
- Hold institutions accountable for performance and their role in achieving state attainment goals.

Progress toward these objectives is measured by metrics spanning multiple categories, as outlined in **Table 1**.

In accordance with the best practices outlined herein, OBF models generally are based on identified attainment and completion priorities, are developed in collaboration with institutions and phased in to allow them time to adjust, and account for the diversity of institutional missions and student populations with clear, consistently reported metrics. Importantly for sustainability, OBF is increasingly used to allocate some portion of the general fund appropriation from the state to the institution, and there is commitment to monitoring quality to address the concern that incentives for completion could encourage a lowering of standards.

More advanced OBF models have a direct link to the state's higher education attainment needs and place primary emphasis on student completion, though they often include measures beyond student progression and completion. Advanced OBF models also determine how a significant portion of the state's general budget allocation to institutions is allocated; OBF is central to institutional allocations, not a separate, peripheral budget item. Importantly, many states' policies are in the early stages of development or implementation and do not yet fully embody these characteristics.

The following typology demonstrates the characteristics of state policies at varying levels of development.

TYPOLOGY OF OBF SYSTEMS

The classification system outlined below assigns states' FY 2015 OBF policies—those being implemented and those that are developed or under development—a "type" according to their level of sophistication and adherence to promising practices. That is, in the following critical areas, the state has[2]:

- Established completion or attainment goals and related priorities;
- Stable funding structure (base funding);
- Significant level of funding;
- Inclusion of all institutions in both two-year and four-year sectors;
- Differentiation of metrics and their associated weights by sector;
- Inclusion of degree/credential completion as a metric; and
- Prioritization of underrepresented students.

These typology characteristics reflect commonly articulated and research-informed design and implementation principles[3] and together enable a broad analysis of state OBF policies. The design and implementation principles reflect more specific considerations for states to inform development of strong OBF finance policies.

The typology examines state-level higher education finance policy and its alignment to postsecondary completion goals.[4] In general, Type I systems are rudimentary and may be pilot efforts that do not yet have the support to attract more significant levels of funding and development; these models may share features of early performance funding models and represent a minimal alignment between completion and attainment goals and the state's finance policy. Types II and III represent increasing degrees of development and adherence to promising practices, while Type IV systems are the most robust, with significant and stable funding, full institutional participation, differentiation of metrics by sector, and prioritization of both degree/credential completion and outcomes for underrepresented students—all elements informed by early research and practice. These models reflect a strong alignment between the completion and attainment agenda and a state's institutional finance policy.

2 The typology components reflected are not a complete list of all design and implementation considerations for states as they pursue the development of an OBF finance policy. Policy practices such as consultation with institutions, ensuring the impact of a new funding model is phased in to avoid large shifts in year-to-year funding, sustainability over multiple years/budget cycles, and ongoing evaluation and refinement should also be part of a state's policy approach. While not reflected directly in this initial typology, these practices will be part of the ongoing evaluation of state policy approaches.

3 For more on the promising practices that informed this typology, see the Development and Implementation Principles section.

4 Similar analysis of sector-specific formula and component breakdowns can help to understand more direct effects of OBF formulas. That analysis will be provided by HCM in the next phase of its work.

In a few cases, a state has some form of an OBF policy in place but has not established a statewide completion/attainment goal or related priorities. This reflects a misalignment of its own—a finance policy not anchored to an overall goal or agenda. As noted in the Design and Implementation Principles section, articulating goals and priorities is an important part of any higher education policy development—finance or otherwise.

For a listing of states' FY 2015 policies by type, see **Appendix A**. Sources are listed in **Appendix B**.

Typical Characteristics *Note: Some states may meet most but not all criteria.* *States that do not meet all criteria for a particular type are assigned a lower type.*	
Type I	• State does not have completion/attainment goals and related priorities • Bonus funding • Low level of funding (under 5%) or funding to be determined • Some or all institutions in one sector included • No differentiation in metrics and weights by sector • Degree/credential completion not included • Outcomes for underrepresented students not prioritized
Type II	• State has completion/attainment goals and related priorities • Base funding • Low level of funding (under 5%) or funding to be determined • All institutions in one sector included, or some institutions in both sectors • No differentiation in metrics and weights by sector, or may not be applicable (if operating in only one sector) • Degree/credential completion included • Outcomes for underrepresented students may be prioritized
Type III	• State has completion/attainment goals and related priorities • Base funding • Moderate level of funding (5-24.9%) • All institutions in all sectors included • Differentiation in metrics and weights by sector likely • Degree/credential completion included • Outcomes for underrepresented students prioritized
Type IV	• State has completion/attainment goals and related priorities • Base funding • Substantial level of funding (25% or greater) • All institutions in all sectors included • Differentiation in metrics and weights by sector • Degree/credential completion included • Outcomes for underrepresented students prioritized

STATUS OF OBF IN THE STATES

As of Fiscal Year 2015,[5] 35 states (70 percent) are developing (10 states) and/or implementing (26 states) OBF policies[6], with great variance in the critical elements included in the typology and reflected in the associated design and implementation principles.

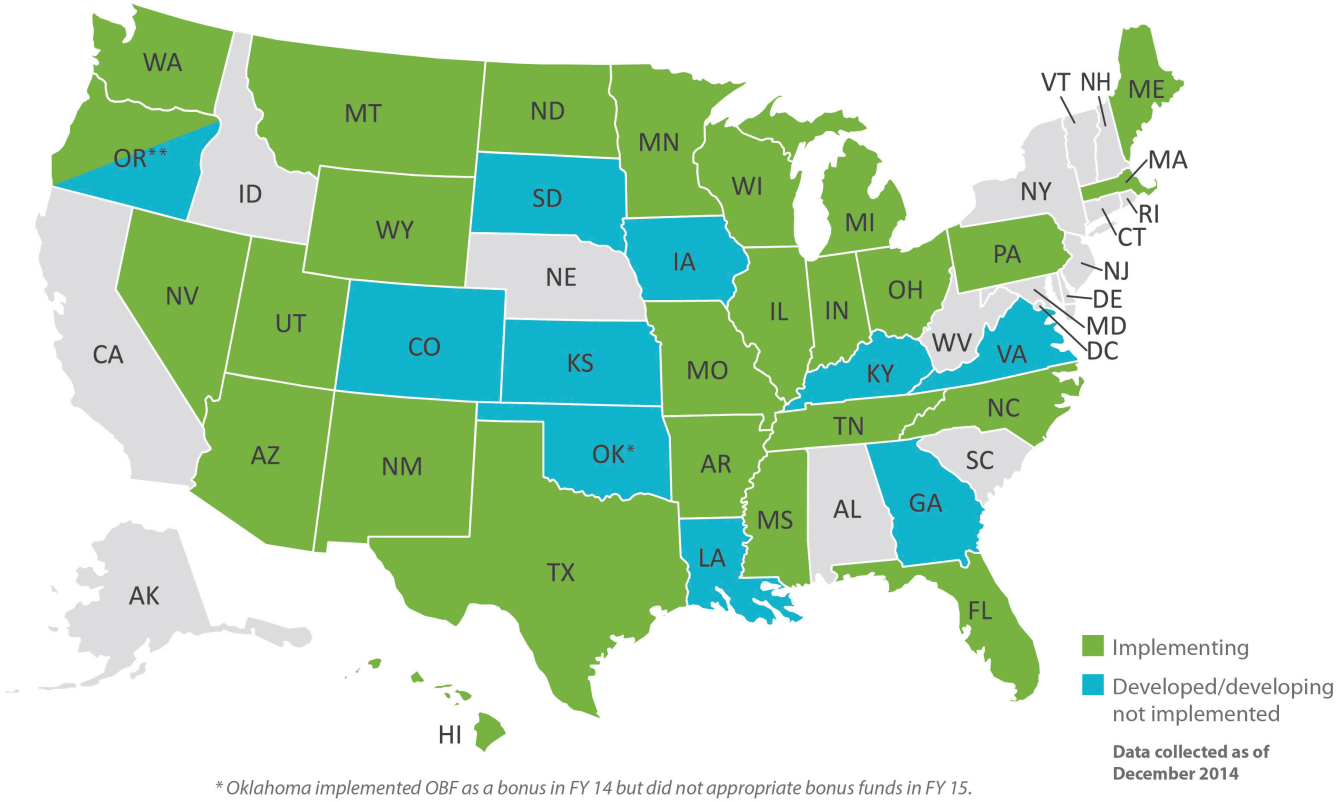
The maps that follow depict state policies as of December 2014 according to implementation status. **Figure 1** shows which states have implemented (i.e., allocated funding to) OBF and which states are developing or have developed but not yet implemented an outcomes-based funding formula.

Figure 2 highlights states that are implementing OBF by type, and which sectors are covered by the OBF system. **Figure 3** shows states that have developed or are developing OBF but have not yet implemented the policy, and sector participation is denoted. In both figures, states were classified by type according to what is currently known about their plans; in some instances, a lower type assignment in Appendix A may reflect a lack of information rather than a weak or embryonic policy. Some states also plan to start with more limited participation and functionality, with the intent to expand and refine over time.

5 According to data collected as of December 2014.

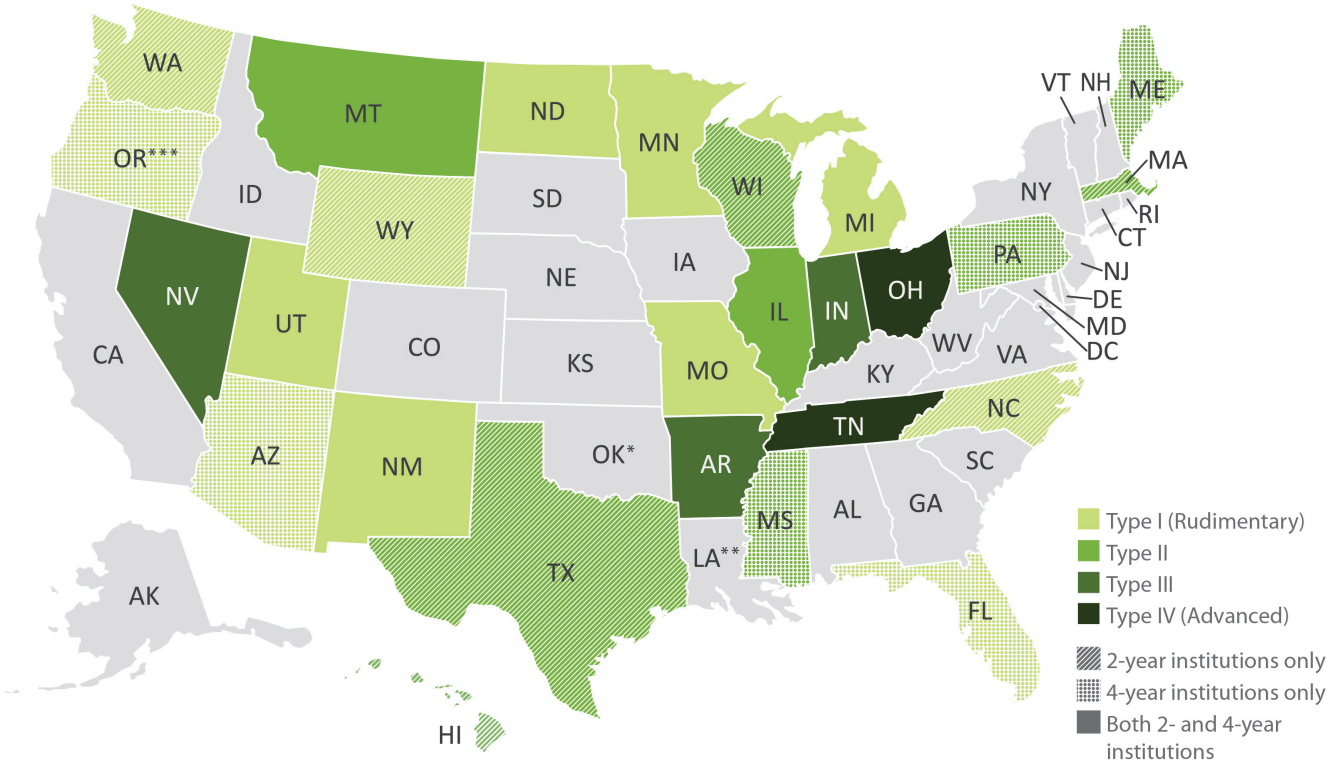
6 Oregon is counted as both a developing and implementing state (as it is developing a model for two-year institutions and implementing and revising one for four-year institutions), but is counted only once in the total of 35 states.

FIGURE 1. Outcomes-Based Funding in States in FY 15



** Oklahoma implemented OBF as a bonus in FY 14 but did not appropriate bonus funds in FY 15.*
*** Oregon is both developing and implementing.*

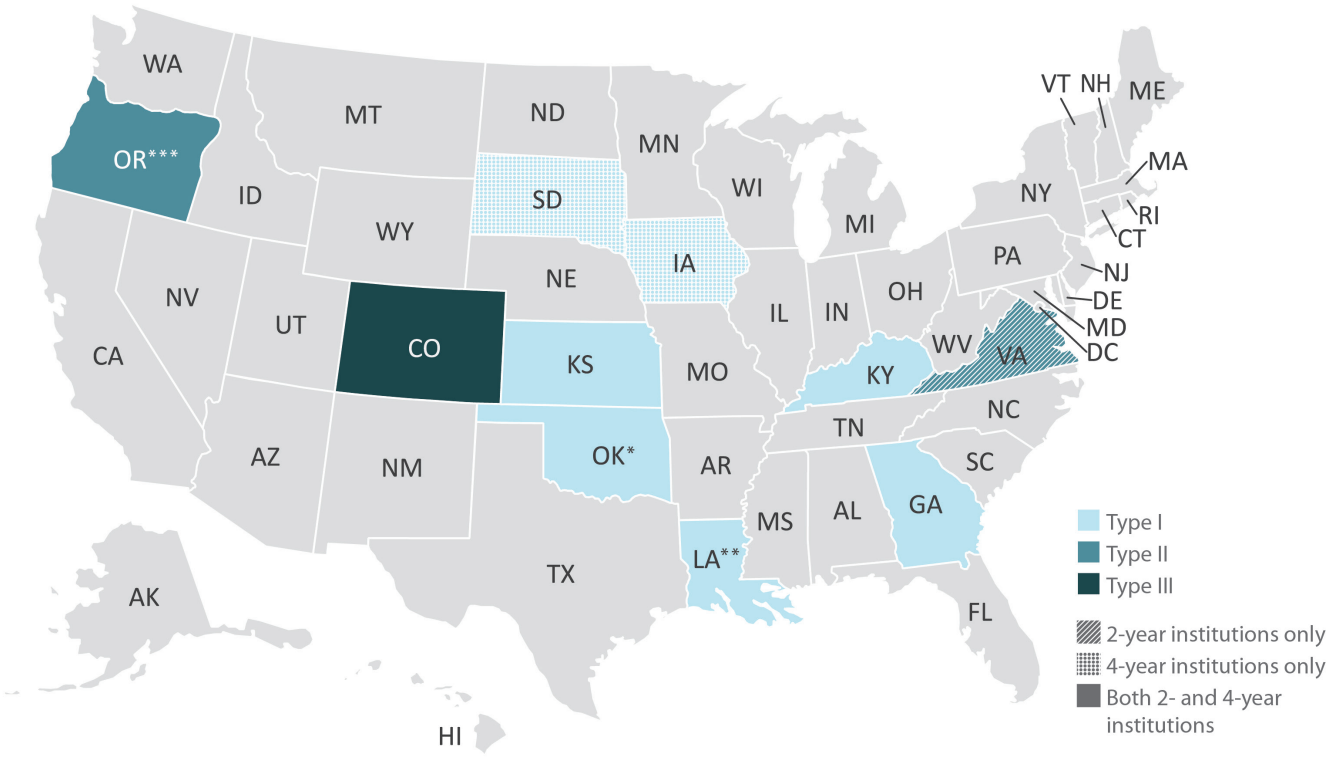
FIGURE 2. States Implementing OBF in FY 15, by Type and Sector



** Oklahoma implemented OBF as a bonus in FY 14 but did not appropriate bonus funds in FY 15.*
*** Louisiana used a funding formula in part based on outcomes in FY 14. The formula was not used in FY 15.*
**** Oregon is both developing and implementing.*

Data collected as of December 2014

FIGURE 3. States with Developed/Developing OBF in FY 15, by Type and Sector



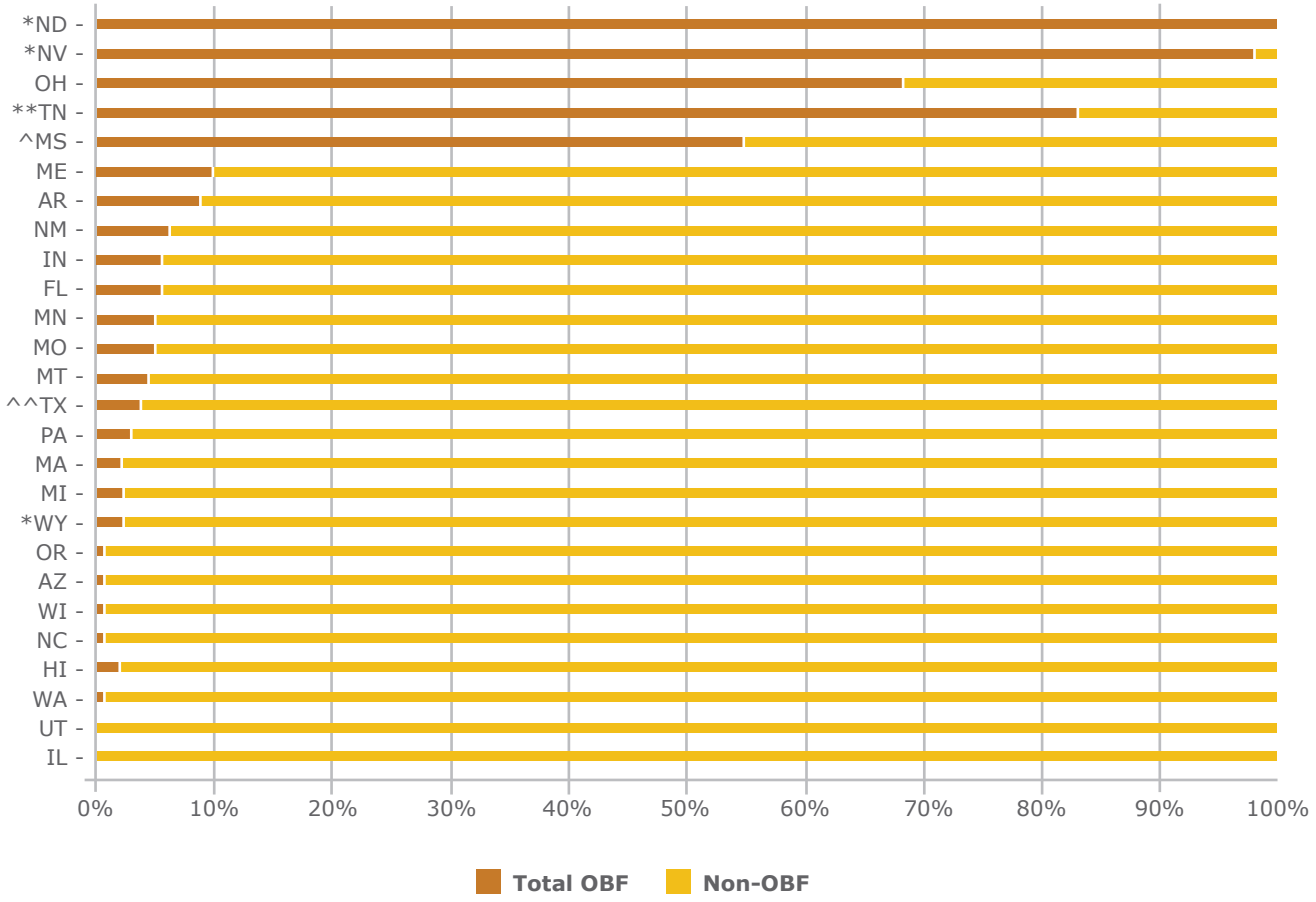
Data collected as of December 2014

** Oklahoma implemented OBF as a bonus in FY 14 but did not appropriate bonus funds in FY 15.*
*** Louisiana used a funding formula in part based on outcomes in FY 14. The formula was not used in FY 15.*
**** Oregon is both developing and implementing.*

FUNDING ASSOCIATED WITH OBF

There is wide variation in the level of funding associated with student success and completion. While a number of states have OBF policies, many have not invested much in them to date. **Figure 4** shows the amount of OBF funding in each state as a percentage of total state support to all higher education institutions. **Figure 5** shows the percentage broken down further between course completion and student progression and degree completion.

FIGURE 4. OBF as a Percentage of Overall State Institutional Support



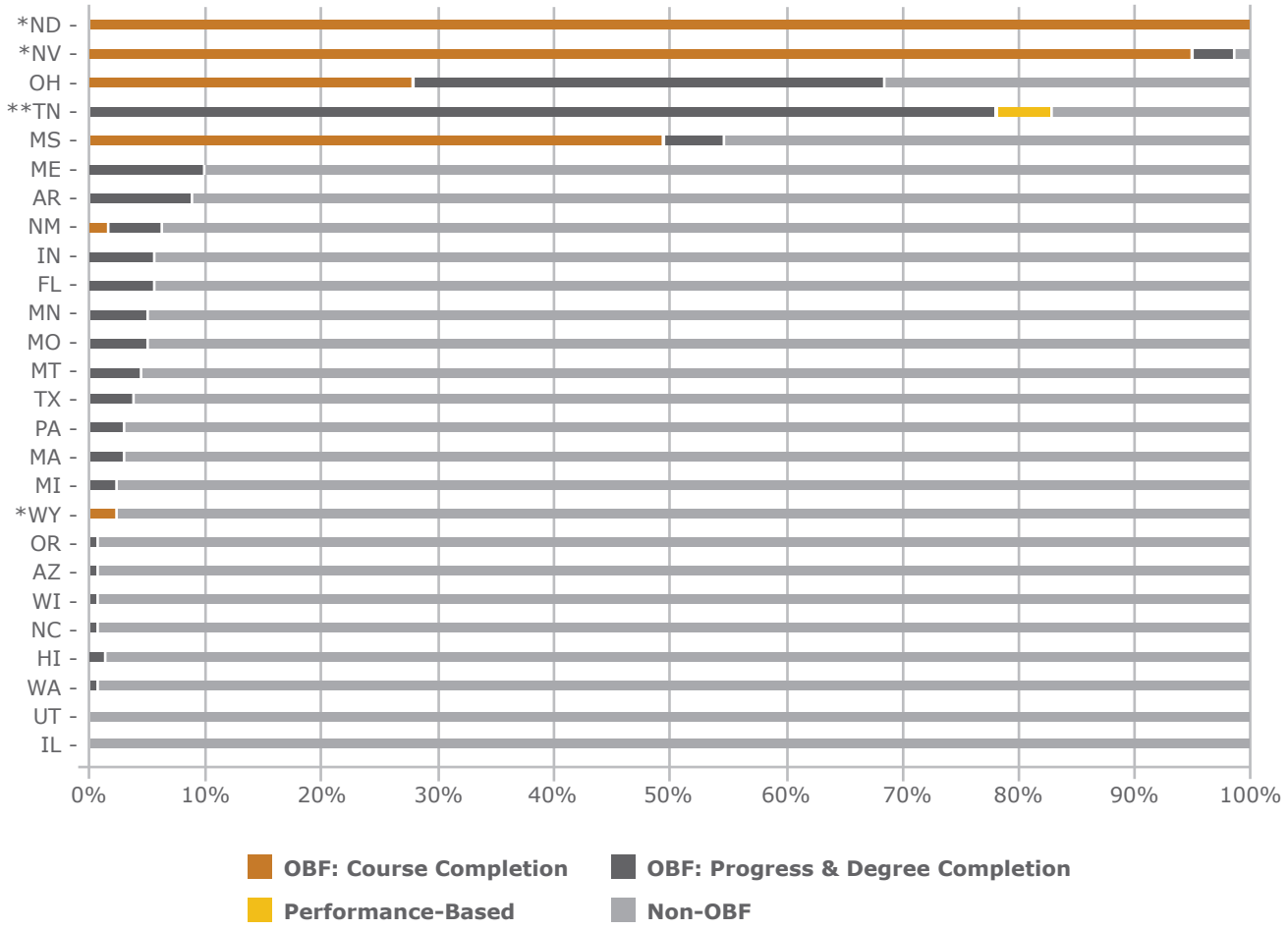
**North Dakota and Wyoming OBF formulas are based on course completions only; no other measures, such as degree completions, are used. Nevada's formula is 96 percent course completion, with approximately 3.8 percent distributed on degree completion and student progression measures.*

***Tennessee has a longstanding performance funding formula that includes measures such as licensure rate passage and student satisfaction. It was maintained within the more recent OBF policy as a quality assurance mechanism. The funds are part of the base/general allocation dollars appropriated to institutions. Total OBF and performance-based funding in Tennessee make up approximately 85 percent of the overall institutional allocation.*

^Mississippi has a stop-loss policy in place. In FY 15, the stop-loss ensured that no institution gained less than 2 percent of prior-year funding.

^^Texas includes funding to the Texas State Technical College System. Funding for TSTC is based entirely on value-added outcomes for students.

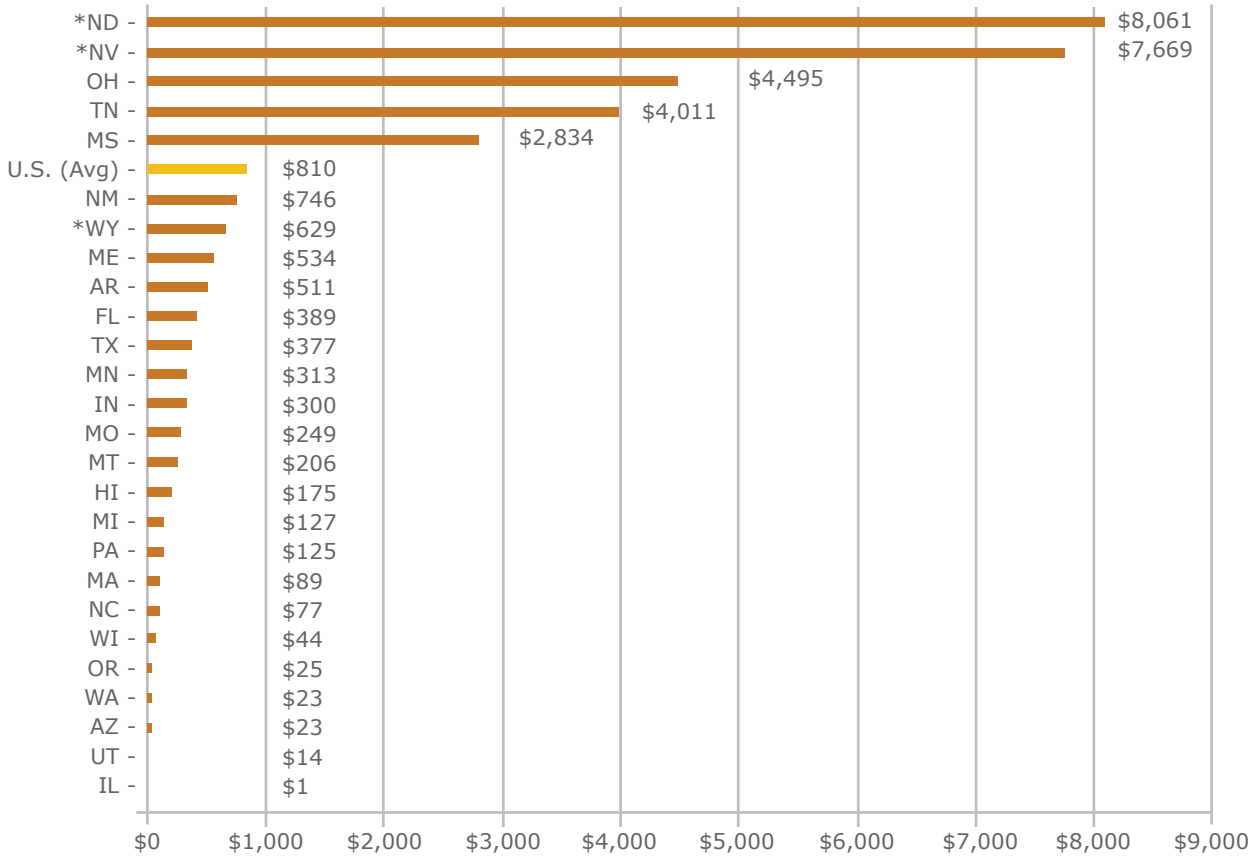
FIGURE 5. OBF as a Percentage of Funding: Broken out by course completion and progression and degree completion



**North Dakota and Wyoming OBF formulas are based on course completions only; no other measures, such as degree completions, are used. Nevada's formula is 96 percent course completion, with 3.8 percent distributed on degree completion and student progression measures.*

Figure 6 shows OBF spending on a per-student basis. Nationwide, implementing states averaged an estimated $810 per student in OBF.

FIGURE 6. Estimated OBF Spending in FY 15, Per Student[7]



** North Dakota and Nevada are significant outliers on OBF expenditures per student. North Dakota funding is only based on course completion, with no degree/credential completion included as a metric. Nevada funding is 96 percent course completion, with approximately 3.8 percent based on degree/credential completion and other measures. Wyoming is also a course completion-only model.*

Source: Lumina Foundation Strategy Labs and Postsecondary Analytics with additional HCM analysis to include course completion, which adjusted state totals. Based on fall 2013 full-time equivalent student count. Data collected as of December 2014.

7 Per Student is defined as full-time equivalent (FTE).

METRICS COMMONLY USED IN OBF MODELS

States incorporate a variety of metrics in their OBF systems depending on specific state priorities. As noted, in advanced OBF finance models, these priorities and the aligned funding models are derived from a broader articulated completion and/or attainment goal. Examples of common metrics are detailed in the table below.

TABLE 1. Common OBF Metrics

Type of Measure	Examples
Priority *Student categories and/or degree types that are a priority for the state to meet attainment and job needs; student focus is on progression and completion, not just access*	• Adult students • Academically underprepared students • Low-income (Pell Grant-eligible) students • Underrepresented students • STEM-H degrees *Note: often reflected by providing an extra weight to progression and completion metrics*
Student Progression and Momentum *Intermediate outcomes/key milestones important to student progression toward completion*	• Remedial education success • Completion of first college-level mathematics and English courses • Credit accumulation (e.g., 15, 30 credit hours)
Completion *Promote certificate/degree completion and transfer*	• Number or rate of program completers • Number of transfers • Licensure pass rates • Job placement
Productivity and Institution Mission *Promote efficiency, affordability and focusing dollars on core mission functions*	• Degrees per 100 FTEs • Research

WHAT THE RESEARCH SAYS

In many cases, early performance funding models were not derived from or grounded in a clearly articulated completion goal; rather, they addressed other, more loosely defined state goals and priorities. And in many cases, even if increased completion was a noted priority, these early performance models were rarely a significant driver of institutional funding and therefore did not effectively reorient institutions' focus to completion and student success. Nonetheless, states that were early to adopt performance funding have identified promising outcomes from those policies (which have generally evolved into more robust OBF policies in implementation today).[vii] For example:

- Tennessee reported positive learning gains at all institutions, even with a small amount of money at stake in its previous performance funding model.
- Florida community colleges saw enrollments increase by 18 percent and completion of degrees and certificates jump by 43 percent from 1996 to 2007.
- Ohio reported faster time-to-degree and greater persistence and completion, especially for at-risk students, in its prior Completion Challenge program.
- Washington's community colleges boosted the number of momentum points achieved by 12 percent.[viii]

Independent qualitative research has focused mostly on such early performance funding policies—not today's OBF—and indicates that despite early model flaws, benefits to institutions in performance funding states included:

- Greater awareness of state priorities and their own institutional performance;[ix]
- Increased use of data to inform decision-making;[x]

State Exemplar

TENNESSEE
TYPE IV OBF MODEL

Key features include:

Derived from state completion goal and priorities
- Complete College Tennessee Act of 2010
- Drive to 55 initiative

Significant level of base funding
- 85%* of state funding tied to outcomes

Completion as a primary metric
- Degrees per 100 FTEs
- Completion of Certificates, Associate, Bachelor, Professional and Doctoral Degrees

Mission differentiation
- Different metrics for community colleges and 4-year institutions, weighted relative to mission

Prioritization of underserved populations
- Incentive to serve low-income and adult populations

**Some sources cite 100%, but 15% is set aside for operations and maintenance.*

- Increased institutional funding dedicated to instruction;
- Improved student services, policies and practices, from financial aid to advising;
- Improvements in developmental education and tutoring;
- Changes to course sequences and curricula; and
- Professional supports to improve teaching among faculty.

Potential unintended consequences noted by research[xi] include:

- Costs to comply with data collection;
- Reduced academic standards;
- De-emphasis of parts of an institution's mission;
- Increased admissions standards; and
- Inhibited faculty voice.

All of the responses noted above can be characterized as intermediate impacts at the institutional level. Few multivariate quantitative studies have ever been conducted to examine the impact of early performance funding or more recent OBF models on the articulated policy objectives and goals. Additionally, the few quantitative studies that have been conducted do not delineate different design and implementation elements, which qualitative research has shown make a difference in the impacts observed.[xii] Particularly, studies do not take into account the goals to which the policy is aligned, the percentage of total funding allocated through performance funding, and the sustaining of the policies over time (e.g., base or bonus allocations, multiple budget cycles), all of which can affect policy effectiveness and observed results.

State Exemplar

OHIO

TYPE IV OBF MODEL

Key features include:

Derived from state completion goal and priorities

Significant level of base funding
- 100% of State Share of Instruction

Completion as a primary metric
- 4-year institutions: 50% degree completion, 30% course completion and 20% doctoral/medical
- 2-year institutions: 50% course completion, 25% student success points and 25% completion milestones

Underrepresented students prioritized
- Both sectors include priority for adult, low-income, minority and academically underprepared students

Phased in
- Stop-loss was in place 2009–2014
- Adjusted allocation across metrics over time (phased increased weight on credential completion)

The limited research on more recent funding models is focused primarily on the political and policy environments surrounding OBF. Within the next several years, sufficient time will have passed for a full cohort of students to progress through institutions under current OBF models in several states, which will prove fruitful for future academic research on the policy.

DESIGN AND IMPLEMENTATION PRINCIPLES

Analysis of early and contemporary performance funding policies has yielded a number of design and implementation considerations to guide states in developing and/or updating their OBF models. Many of the current policies reflect these recommendations, which are described below along with their research underpinnings.

As previously noted, the typology presented in this paper is derived from these design and implementation principles. Following the more specific design and implementation principles outlined can inform the development of strong OBF policies.

Design Principles

1 ***Communicate leadership commitment to pursue specific statewide priorities regardless of a state's funding situation***

State leadership must be firmly committed to and clearly articulate statewide priorities, such as a goal to increase the percentage of residents who complete a postsecondary degree. The commitment must be maintained regardless of the state's funding situation; if budget cuts are necessary, the outcomes-based funding formula should still be used to allocate some portion of dollars to institutions.

State Exemplar

INDIANA
TYPE III OBF MODEL

Key features include:

Derived from state completion goal and strategic plan priorities

- Reaching Higher Achieving More
- Moderate level of funding
- State has sustained policy over multiple budgets since 2007

Completion as a primary metric

- Overall Degree Completion
- On-Time Degree Completion.

Mission differentiation

- 2-year and 4-year institutions eligible for different metrics (e.g. remedial education for two-years; high impact degrees for four-years)

Prioritization of underserved populations

- At-Risk Degree Completion defined as Pell-eligible students

Link to Research: Research shows that aligning funding with statewide priorities can lead to greater scrutiny of effectiveness of campus programs and services and promote better alignment between campus planning, budgeting and performance.[xiii]

Associated Typology Criteria: This design principle is directly associated with the typology criterion that the funding model is derived from state completion/attainment goals and related priorities.

2 *Establish consensus around goals*

Securing agreement around a bipartisan, statewide "public agenda" that is targeted to the state's needs and its residents—not just postsecondary institutions—*before* developing an OBF policy will help ensure its sustainability. Seeking stakeholder input will help to ensure broad support and technical accuracy in building an OBF model.

Link to Research: Several of the earlier performance funding models were not clearly linked to a definitive goal, focused on completion or connected to well-defined policy priorities and objectives for the state's investment in higher education.[8] The funding policy was trying to be all things to all priorities, sending mixed and often misaligned signals to institutions. Additionally, many early models did not engage institutions in the planning or design of funding models.[xiv] As a result, there was a perception that the funding model used inappropriate measures and did not accurately reflect the mission of institutions toward achieving state goals.[xv]

Associated Typology Criteria: This design principle is associated with the typology criterion that the funding model is derived from state completion/attainment goals and related priorities.

3 *Make funding meaningful and secure*

The share of institutional funding devoted to OBF must be large enough to garner attention, shape priorities and influence actions. Research has not informed a precise amount or percentage of funding to be allocated on outcomes. However, as the policy intent is to align the state's finance policy with the state's policy priorities, as was done with enrollment- driven policies, it would hold that a similar approach should be taken with

8 For example, performance funding models in many states (such as Kentucky, Louisiana and South Carolina) had a mix of measures focused on inputs, processes and outcomes. Many of the metrics were difficult to define and consistently measure. Examples include: global perspective in academic programs (Kentucky); review of gender issues (Kentucky); use of technology in student learning (Kentucky); best practices in administration (Louisiana); faculty activity (Louisiana); approval of mission statement (South Carolina); quality of faculty (South Carolina); and quality of entering students (South Carolina).

outcomes-based funding policies. The less the allocation model is tied to outcomes, the less the state's finance policy is aligned with its completion priorities and needs. Building OBF into institutions' existing base allocations, rather than offering it as a bonus, promotes sustainability and ensures that the policy intent does not languish while waiting for new funding that may never materialize.

Link to Research: Several analyses of earlier performance funding models cite small amounts of funding as an important limiting factor for the intended impacts of the funding policies.[xvi] These earlier models linked a very small proportion (often 1 or 2 percent) of an institution's total state allocation to the established measures. If the large majority of institution funding remains based in prior allocation models, it will be difficult for the measures to drive behavior and produce significant results. In fact, as quoted by Dougherty and Reddy (2013), institutional leaders indicated they felt these models were merely symbolic and did little to change behavior beyond data collection and analysis.[xvii] Additionally, if the outcomes-based formula is implemented with new money only, this bonus allocation is often the first thing reduced or eliminated in tight budget climates. Either of these scenarios—limited existing dollars or new funding only—ultimately continues the existing disconnect between the state's higher education policy priorities and its funding policy. This also makes it difficult for funding models to have an impact on institutional practices and policies that will improve student success.[xviii]

Associated Typology Criteria: This design principle corresponds with the typology criteria on funding structure (base or bonus) and level of funding.

4 *Identify limited, measurable metrics*

OBF must be clearly tied to the state's goals and priorities and include metrics identified at the outset that are easily measured and available; otherwise, the system may be compromised or lose credibility. Metrics that are ambiguous, easy to game or inconsistently reported should not be included. For instance, metrics should emphasize numbers of graduates versus graduation rates, as rates are easier to game.[xix] The OBF formula should track a limited number of metrics in order not to dilute the focus on key priorities. States should consider metrics that link to workforce needs (such as priority degree fields and levels) and metrics related to job placement, wage data, return on investment and quality, in addition to success with underserved populations as noted below.[xx]

Link to Research: Early performance funding models were often weighed down with too many metrics. In many cases the metrics were not easily understood or quantifiable and lacked reliable, consistently collected data.[xxi] Additionally, many models included measures focused more on inputs or processes than student progression and outcomes.[xxii] Some examples include metrics such as: curricula offered to achieve a mission; adoption of a

strategic plan; inclusion of a global/international perspective into academic programs; and use of best management practices.[xxiii] Collectively, this resulted in complicated funding systems and burdensome data collection requirements.

Associated Typology Criteria: This design principle is associated with two typology components: differentiation of metrics and their associated weights by sector, and the inclusion of degree/credential completion as a primary metric. Additionally, a funding model derived from a state completion or attainment goal and associated priorities will limit the metrics included to those aligned with the articulated goals.

5 *Include all institutions and allow for differentiation*

All institutions contribute to meeting a state's postsecondary goals and must be included in the OBF system. However, metrics should allow for differences in institutional mission, student population and other characteristics. Some states have chosen to apply a few metrics across institutions, while adopting other unique metrics and weighting them differently across types of institutions. In other states, separate formulas have been developed for the different sectors, often with common categories of metrics but different operational definitions (e.g., degree levels, course completion milestones and mission-aligned metrics such as research for the four-year sector and job placement for community colleges). Many states employ multiple strategies to ensure mission-aligned outcomes-based funding policies.

Link to Research: Some early models focused on one institutional sector—for instance, a state's community colleges—leaving other institutions free of funding accountability. And early models that did include all public institutions failed to adequately distinguish metrics across sectors. This promoted mission creep or put certain institutions at an immediate disadvantage.[xxiv]

Associated Typology Criteria: This design principle is directly reflected in the inclusion of all institutions in both two-year and four-year sectors and differentiated metrics and/or associated weights by sector within the typology.

6 *Incent success with underserved populations*

Many states give extra weight to graduating at-risk, low-income or underrepresented students in their OBF systems to guard against providing institutions an incentive to restrict access (by enrolling only those students most likely to succeed and with the fewest risk factors) in order to boost completion rates. The success of students from underserved populations is critical to meeting states' workforce needs.

Link to Research: Unless explicitly accounted for, outcomes-based funding models that reward success could have the unintended consequence of rewarding colleges that have better-prepared students or providing incentive for colleges to make admissions criteria more restrictive. As summarized by Dougherty and Reddy, responding to performance funding by restricting admissions was cited by many institutional leaders—as either a fear of what could happen or a documented response—as a way to increase performance on measures in the funding model.[xxv]

Associated Typology Criteria: This design principle is directly associated with the typology criterion of prioritization of underrepresented students.

7 *Reward progress and short-term success milestones*

Rewarding short-term success milestones encourages interim progress and eases the transition to OBF. Because such interim measures should not detract from the longer-term outcomes sought, the progress measures may be weighted in a way that prioritizes the completion outcomes.

Link to Research: Including student progress and shorter-term milestones is another common way for states to address the needs of underserved and/or underprepared students. These metrics, referred to as "momentum points," are based on research conducted by the Community College Research Center for the Washington Board of Technical and Community Colleges. They represent key points that lead to greater persistence and success, irrespective of student background characteristics—social and academic.[xxvi]

Associated Typology Criteria: While the typology does not directly reflect this principle, it is related to how a state's funding model derives from completion or attainment goals and priorities. For example, increased completion will require institutions to be more successful in getting students to complete remedial needs, into and through first college-level math and English, and to achieve key credit milestones. Differentiation of metrics and weights by sector is also connected to this principle, as progress and short-term milestones are well aligned to the mission of community colleges, and in many cases comprehensive four-year institutions.

Implementation Principles

1 *Phase in impact of transition to OBF*

To prevent large, disruptive shifts in funding, the impact of new funding models should be calibrated to allow institutions time to adjust to new expectations. Paying close attention to the design principles noted above, which include multiyear averages to stabilize the data, is the first step toward ensuring a predictable model. Upon implementation, states have also used a stop-loss or other calibration method, such as phasing in the percentage of the formula based on outcomes.

Link to Research: Institutional capacity to respond to newly articulated expectations varies widely.[xxvii] This is particularly true when states make significant changes to how institutions receive their general allocation dollars.

Associated Typology Criteria: This implementation principle is not directly reflected in the typology as it is influenced by the various design principles described above. In many cases, the current low or moderate level of state funding associated with outcomes is a reflection of this principle, as the allocation through outcomes will increase over time. In states such as Tennessee and Ohio, where significant levels of general appropriation funding are allocated through outcomes, various methods were employed (weighting structure/formula design, calibration, stop-loss, data stability) to ensure that the model's impact is phased in and does not result in large shifts of dollars year-to-year.

2 *Continuously improve data*

Necessarily, any funding model is limited by the measures that can be appropriately included—those that are clear, measurable and consistently collected. Given that state data systems are in different stages of development in terms of types and quality of data available, there should be ongoing and continuous improvement to data systems. This will allow states to incorporate measures that are currently limited but important to the state's overall goals, such as certificates (and other credentials) and job placement.

Link to Research: Policymakers and institutional stakeholders have raised concerns that the operational measures available to include in outcomes-based funding models are limited and noted the challenges of including strong indicators for certain desirable educational outcomes.[xxviii] In many states, however, the presence of an outcomes-based funding model has spurred collection and reporting of new data elements.[xxix]

Associated Typology Criteria: This implementation principle is not currently reflected in the typology. However, it is closely linked to the goals and priority criterion, as the

funding model will (appropriately) be limited by the data available. Efforts to improve data collection can help states refine models to more closely reflect ultimate goals and priorities, such as certificates and job placement.

3 *Evaluate and adjust*

In addition to supporting independent research to evaluate qualitative and quantitative impacts of OBF, states should carefully monitor and evaluate their policies. When data and experience warrant, adjustments should be made to the model, phasing in larger changes over time. In several states, the stakeholders who initially developed the OBF systems meet periodically to discuss progress and enhancements.

Link to Research: Research indicates that early funding models produced a range of unintended impacts that were left unevaluated and unaddressed.[xxx] Working to mitigate and respond to these concerns is an important and ongoing process, true of any funding model.

Associated Typology Criteria: This implementation principle is not directly reflected in the typology but represents a larger, overarching principle that should be part of any state policy—finance or other. As with all policies, states should examine OBF models to understand, at a minimum, their effectiveness and continued alignment with state goals and priorities.

NEXT STEPS FOR ADVANCING OBF

Although OBF is gaining traction in an increasing number of states, states vary significantly in their level of investment, and their policies vary in sustainability. As detailed throughout this paper and in the accompanying typology, many states have embraced some aspect of outcomes-based funding policies. Only a few states, however, have developed and implemented fully aligned state finance policies with objectives to increase student attainment and close student equity gaps. Policymakers, institutional leaders and other stakeholders must continue to evaluate and understand how these finance policies, in their varied design, align with objectives to support students to complete their programs of study successfully.

As with any policy, outcomes-based funding policies should be evaluated and adjusted as their effects are better known. More refined research that considers the various elements and contexts within each state—institutions affected, mode (base or bonus) and level of investment, metrics used, and sustainability of the policy over multiple budget years—will help inform higher education finance policies and their effects on student success.

Policymakers, stakeholders and researchers would do well to follow these steps.

Provide transparent information on state higher education finance policies.

- Information on how states fund higher education institutions is not readily available, and the level of detail provided on how formulas operate is vague. States should provide more transparent and consistent information on how various funding policies and formulas are implemented, particularly around the funding amount, mechanics (metrics; weighting; stop-loss and other special provisions) and year-to-year status. It is this type of information that will foster greater advancement of the steps that follow.

Communicate within the context of student success reform.

- The limitations of other funding approaches in supporting the wide-scale adoption and integration of student success practices and innovative/accelerated delivery models must be articulated. Policymakers and stakeholders must be made aware that the incentives under non-OBF funding policies are directly at odds with the priority of timely completion.
- Institutional champions should be identified and highlighted at colleges that have embraced OBF as an important tool to advance student success policies and practices.
- All key stakeholders in the policy conversation should be included to better promote understanding, sustainability and technical accuracy.

Support institutions during implementation.

- Institutions should connect OBF with existing student success initiatives, so campus stakeholders can more easily see the ultimate impact on student outcomes of OBF and the institutional behaviors it drives—not just the potentially disruptive or uncomfortable changes the policy may bring about.

Evaluate and advance best practices.

- To understand impact, policymakers should support qualitative and quantitative research on current OBF design and implementation. Such research will also illuminate and refine best practices.
- Stakeholders must ensure that a particular state's OBF policy creates incentives for institutions to better serve disadvantaged students—and that access and achievement gaps are then measurably closing.
- As with many policy initiatives, the success of OBF requires a strong data foundation—so stakeholders must support building data capacity in order to ensure desired outcomes.
- An ongoing commitment to monitoring quality using available indicators is essential to creating, refining and sustaining an effective policy.

Ultimately, OBF is a way of supporting and encouraging institutions to adopt and adapt policies and programs that support better student outcomes. The strain on current financing models is plainly evident—and their shortcomings are reflected in real costs to students, taxpayers and the economy. OBF can and should prompt needed discussions about how—and how well—our colleges are serving students.

While this paper focuses on outcomes-based funding, ideally the examination of a state's finance policies does not end with institution allocations, but considers other policies as well—such as tuition and student financial aid. How do these policies, examined collectively and individually, support institutions to adopt innovative delivery models, encourage students (particularly those typically underserved) to progress toward and complete degrees in a timely manner, and ultimately advance states toward their educational attainment needs?

The analysis of state funding policies must continue in an effort to inform these considerations and understand the most effective way for states to direct their investment in higher education.

Moving toward results-based policies may require fundamental shifts in resources and mindset—but our students deserve no less.

Many individuals lent their talents to the development of this report.

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APPENDIX A

CLASSIFICATION OF STATE OBF POLICIES BY TYPE

The type assignments shown below were assigned according to the typology presented in this paper (see Typology of OBF Systems). The policy components that informed each state's assignment are also shown.[9]

Some states may meet most but not all criteria for a certain type. States that do not meet all criteria for a particular type are assigned a lower type.

9 This typology examines state-level higher education finance policy and its alignment to postsecondary completion goals. Similar analysis of sector-specific formula and component breakdowns can help to understand more direct effects of OBF formulas. That analysis will be provided by HCM in the next phase of its work.

Implementing States in FY 15

State	Type	Linked to State Goals	Base or Bonus	Funding Level*	2-years Included	4-years Included	Differentiation by Sector	Degree/ Credential Completion Included	Underrepresented Students Prioritized
AZ	I	Yes	Bonus	Low	No	Yes, some	N/A	Yes	No
AR^	III	Yes	Base	Mod	Yes	Yes	Yes	Yes	Yes
FL^^	I	No	Base***	Mod	No	Yes	N/A	Yes	No
HI	II	Yes	Base	Low	Yes	No	N/A	Yes	Yes
IL	II	Yes	Base	Low	Yes	Yes	Yes	Yes	Yes
IN	III	Yes	Base	Mod	Yes	Yes	Yes	Yes	Yes
ME	II	Yes	Base	Mod	No	Yes	N/A	Yes	No
MA	II	Yes	Base	Low	Yes	No	N/A	Yes	No
MI	I	Yes	Bonus	Low	Yes	Yes	Yes	No	No
MN	I	No	Base	Mod	Yes	Yes	Yes (by system, not by sector)	Yes (MnSCU)	Yes (U of M)
MS†	II	Yes	Base	High	No	Yes	N/A	Yes	Yes
MO	I	Yes	Bonus	Low	Yes	Yes	Yes	Yes (4-years only)	No
MT	II	Yes	Base	Low	Yes, some	Yes, some	No	Yes	No
NV	III	Yes	Base	High**	Yes	Yes	Yes	Yes, minimal	Yes (2-years)
NM	I	No	Base	Mod	Yes	Yes	No	Yes	Yes
NC	I	No	Bonus	Low	Yes	No	N/A	No	No
ND	I	Yes	Base	High**	Yes	Yes	No	No	No
OH	IV	Yes	Base	High	Yes	Yes	Yes	Yes	Yes
OR^	I	Yes	Bonus	Low	No	Yes	N/A	Yes	Yes
PA	II	Yes	Base	Low	No	Yes	N/A	Yes	Yes
TN	IV	Yes	Base	High	Yes	Yes	Yes	Yes	Yes
TX	II	Yes	Base	Low	Yes	No	N/A	Yes	Yes
UT	I	Yes	Bonus	Low	Yes	Yes	No	Yes	No
WA	I	Yes	Bonus	Low	Yes	No	N/A	Yes	No
WI	II	Yes	Base	Low	Yes	No	N/A	Yes (high-demand fields only)	Yes ("training," not degrees)
WY	I	N/A	Base	Low**	Yes	No	N/A	No	No

** Low (under 5%) / Moderate (5-24.9%) / High (25% or greater)*

*** As reflected in the degree completion component of the typology, North Dakota's and Wyoming's funding models do not include degree completion. Nevada's formula allocates 96 percent of funding on course completion and the remaining 4 percent is based on student progression and degree completion.*

^Arkansas put in place a hold-harmless policy in 2014. The hold-harmless provision prevents any redistribution or loss of funds if institutions "participate in any initiative promoted by the Arkansas Department of Higher Education (ADHE) that has the potential to adversely affect the outcomes of compliance with performance measures." In FY 15, two institutions fell within the hold-harmless clause. One institution performed a degree audit, which enabled it to award a higher number of associate degrees in one year than it normally would. Another institution undertook remedial course redesign. Because of the way Arkansas' model calculates "improvement," these positive actions would have negatively impacted these institutions' score and distribution.

^^Florida used 50 percent new money and 50 percent from institution base dollars for the allocation of its FY 15 OBF model. The state plans to allocate some level of base funding according to outcomes even if no new dollars are available in a given year. Exact percentage has not been determined.

† Mississippi has a hold-harmless policy in place that currently acts as a stop-loss. In FY 15 the stop-loss was "funded" with new dollars that resulted in no institution receiving a less than 2 percent increase. Stop-loss policies can provide stability through transition to OBF models. However, it is unclear how long the stop-loss will be in place for Mississippi and what will happen should new funding not be available.

++ Oregon is listed as both implementing and developing as the state is undergoing significant revisions to its funding policy.

Developed/Developing States in FY 15

State	Type	Linked to State Goals	Base or Bonus	Funding Level*	2-years Included	4-years Included	Differentiation by Sector	Degree/ Credential Completion Included	Underrepresented Students Prioritized
CO	III	Yes	Base	Mod	Yes	Yes	Yes	Yes	Yes
GA	I	Yes	Bonus	TBD	Yes	Yes	TBD	Yes	TBD
IA	I	No	Base	TBD/Mod	No	Yes	N/A	Yes	Yes
KS	I	Yes	Bonus	TBD	Yes	Yes	Yes	Yes (permissible, not required)	Yes (2-years; permissible at 4-years)
KY	I	Yes	TBD	TBD	Yes	Yes	Yes	Yes	Yes
LA^	I	Yes	Base	Low	Yes	Yes	No	Yes^^	Yes
OK+	I	Yes	Bonus	TBD/Low	Yes	Yes	No	Yes	Yes
OR++	II	Yes	Base	TBD	Yes	Yes	Yes	Yes	Yes
SD	I	Yes	Bonus	TBD	No	Yes	N/A	Yes	TBD
VA	II	Yes	Base	TBD	Yes	No	N/A	Yes	Yes

** Low (under 5%) / Moderate (5-24.9%) / High (25% or greater)*

^In FY 14, Louisiana implemented a funding formula in part based on outcomes. In FY 15, institutions were held harmless and received the same funding as FY 14. In addition, some institutions received $6.1 million in equity funding allocated to institutions whose FY 15 base funding was lowest from the calculated "implementation rate" as determined by the funding formula.

^^ Louisiana's formula includes a Pell Grant student component, but it is based on number of Pell Grant recipients enrolled, not completion. Additionally, the completion component of the formula is focused only on certain workforce-aligned certificates and degrees.

+ Oklahoma implemented OBF as a bonus in FY 14 but did not appropriate bonus funds in FY 15.

++ Oregon is listed as both implementing and developing as the state is undergoing significant revisions to its funding policy.

APPENDIX B

SOURCES

State	Source
Arizona	Arizona State Legislature, Joint Legislative Budget Committee, Budget Update, "FY 2015 Appropriations Report," Arizona Board of Regents
Arkansas	Arkansas Department of Higher Education, Institutional Finance Division, Annual Operating Budgets, "Arkansas Public Higher Education Operating & Capital Recommendations, 2015–2017 Volume 1, Universities," Page 7
	Arkansas Department of Higher Education, Research and Planning Division, Performance Funding—Definitions and Technical Specifications
	State of Arkansas, 88th General Assembly, Regular Session 2011, Senate Bill 766 As Engrossed
Colorado	General Assembly of the State of Colorado, House Bill 14-1319
	Colorado Department of Higher Education, A New Funding Model for Higher Education
Florida	State University System of Florida, Board of Governors, Budget and Fiscal Reports, Performance Funding Model, "Allocation to institutions approved at Board of Governors June Board Meeting," June 19, 2014
	State University System of Florida, Board of Governors press release, "Board of Governors releases performance funding to universities," October 9, 2013
	State University System of Florida, Board of Governors press release, "Board of Governors unveils performance funding metrics," January 16, 2014
	Florida Statute: Title XLVIII Chapter 1011 1011.905
	State University System of Florida, Board of Governors, Performance Based Funding Model
Georgia	State of Georgia, Higher Education Funding Commission Report to Governor Deal, 2013
Hawaii	University of Hawaii System Budget Office, Current Budget Documents, "FY15 Operating Budget Summary," 05/01/2014
	House Bill 2978, 24th Legislature (Hawaii 2008)
	National Conference of State Legislatures. Performance-Based Funding for Higher Education, March 5, 2014
	University of Hawai'i System, Office of the Vice President for Community Colleges, "Budget Planning and Finance—Budget Execution, Outcomes Funding"

Illinois	Illinois Board of Higher Education, Performance Funding, Meetings, Presentation, "Illinois Higher Education Performance Funding Model" Slides 7 and 8 (September 15, 2014)
	Illinois Office of Management and Budget, "Fiscal Year 2015 Enacted Total Budget by Line Item"
	National Conference of State Legislatures, Performance-Based Funding for Higher Education, March 5, 2014
Indiana	Indiana Commission for Higher Education, Performance Funding, 2013-15 Budget Performance Formula Model, "HB 1001 As-Passed 5-8-13"
	Indiana Commission for Higher Education, Performance Funding
Iowa	Iowa Board of Regents, Performance-Based Revenue Model Task Force, October 18, 2013, Meeting Materials
	Vanessa Miller, *The Gazette*, "Board of Regents approves state funding request," September 10, 2014
Kansas	Kansas Board of Regents, Performance Agreement Model, 2013
	Kansas Board of Regents, "Act on Performance Agreements," December 20, 2013
Kentucky	Chris Kenning, *The Courier-Journal*, "Kentucky weighs revamping university funding," September 17, 2014
Louisiana	Louisiana Board of Regents, "Third Annual Review of the Master Plan for Postsecondary Education in Louisiana: 2011," August 2014
Maine	University of Maine System Office, Finance and Administration, "FY 2015 Proposed Unified Operating Budget & Student Charges, May 2014," Slide 4
	University of Maine System, "Outcomes-based Funding Model," January 2013
	National Conference of State Legislatures, Performance-Based Funding for Higher Education, March 5, 2014
Massachusetts	Commonwealth of Massachusetts, Administration and Finance, Budget, Tax, and Procurement, FY 2015 Budget Information for Community Colleges
	Marcella Bombardieri, *The Boston Globe*, "Mass. ties community college funding to results," August 12, 2013
	188th General Court of the Commonwealth of Massachusetts, "FY 2014 Budget"
	National Conference of State Legislatures, Performance-Based Funding for Higher Education, March 5, 2014
Michigan	Michigan State Budget Office, Executive Budget, "Executive Budget Fiscal Year 2015 and 2016"
	Michigan Senate Fiscal Agency Bill Analysis, "House Bill 4228 (CR-1): FY 2013–14 Education Omnibus Appropriation Bill"

Minnesota	Minnesota State Legislature, Minnesota Senate, SF 1236, 3rd Engrossment – 88th Legislature
	University of Minnesota, President's Recommended FY 15 Operating Budget, June 13, 2014, Page 17
	Minnesota State Legislature, 88th Legislature (2013–2014), SF 1236, 3rd Engrossment
	Doug Belden, *Pioneer Press*, "Legislature sends higher ed bill to Dayton; includes 2-year tuition freeze," May 17, 2013
	National Conference of State Legislatures, Performance-Based Funding for Higher Education, March 5, 2014
Mississippi	National Conference of State Legislatures, Performance-Based Funding for Higher Education, March 5, 2014
	Mississippi Public Universities, press release, "Board of Trustees Approves New Allocation Model for University System," April 18, 2013
	Mississippi Senate Bill 2851, 2013 Regular Session
Missouri	Missouri Department of Higher Education, Legislative and Budget, FY 2015 Higher Education Operating Budget Status
	Coordinating Board for Higher Education, Missouri Department of Higher Education, Performance Funding Model: Recommendations of the Performance Funding Task Force, April 5, 2012
Montana	Montana University System, FY 15 Performance Funding Model
	Montana University System. Performance Funding Taskforce Report and Recommendations, May 23, 2013
	Montana University System, MUS Performance Funding FAQs
Nevada	Nevada System of Higher Education, FY2015 NSHE Operating Budget, Page 17
	Nevada System of Higher Education, Performance Funding
New Mexico	National Association of State Budget Officers, "Summaries of Fiscal Year 2015 Proposed & Enacted Budgets," July 11, 2014
	New Mexico Legislature, FY15 Volume III Graphs and Tables, Pages 87–88
	New Mexico Legislature, FY15 Volume III Graphs and Tables, Pages 341–343
North Carolina	North Carolina Community Colleges, Finance and Operations, Budget Information, "FY 2014–15 State Aid Allocations and Budget Policies," August 15, 2014, Page 27
	North Carolina State Board of Community Colleges, Division of Finance and Operations, "FY 2013–14 State Aid Allocations and Budget Policies," August 16, 2013
	North Carolina Community College System, SuccessNC, "Performance Measures & Funding"
	North Carolina Community College System, SuccessNC, "July 2014 Update"
	North Carolina Statute Section 115D-31.3, Institutional performance accountability.

North Dakota	Tammy Dolan, North Dakota Office of Management and Budget, "Higher Education Funding Formula: Implementation Status and Proposed Changes," February 20, 2014
	Tim Anderson, *Stateline Midwest*, "North Dakota joins states with performance-based model for funding higher education," June 2013
	North Dakota Statute, Chapter 15–18.2, State Aid for Institutions of Higher Education
Ohio	Ohio Board of Regents, FY 2015 Operating Budget Details, Page 7
	House Bill 59, 130th General Assembly (Ohio 2013)
	University System of Ohio, Budget & Financial, FY2015 Operating Budget, FY2014 Operating Budget, FY2014 Community College SSI Presentation, FY2014 University SSI Presentation
Oklahoma	Oklahoma State Regents for Higher Education 2014 Legislative Agenda
	National Conference of State Legislatures, Performance-Based Funding for Higher Education, March 5, 2014
Oregon	Oregon University System, Budget Operations, 2014–15 Budget Report Summary, August 2014, Page 7
	Oregon University System, Budget Operations, 2013–14 Budget Report Summary, December 18, 2013
Pennsylvania	Pennsylvania's State System of Higher Education, Administration and Finance, Accounting, "State System's Financial Statements, June 30, 2014"
South Dakota	South Dakota Statute, Sections 13–48A-8 (SL 2013, ch 81, § 9)
Tennessee	Tennessee Higher Education Commission, Outcomes-Based Funding Resources, "2014–15 Components Analysis," 2014–15 Legislative Action, Total State Appropriations
Texas	Texas Higher Education Coordinating Board, Finance and Resource Planning, Formula Funding Recommendations, 2016–2017 Biennium, Page 17
	Texas Higher Education Coordinating Board, Formula Funding
Utah	Utah State Legislature, 2014 Interim, Budget of the State of Utah FY 2014–15, "Budget of the State of Utah and Related Appropriations 2014–2015," Page 119
	National Conference of State Legislatures, Performance-Based Funding for Higher Education, March 5, 2014
Virginia	National Conference of State Legislatures, Performance-Based Funding for Higher Education, March 5, 2014
Washington	Washington State Legislature, "Third Engrossed Substitute Senate Bill 5034, 63rd Legislature, 2013, 2nd Special Session," Page 185
	Washington State Board for Community & Technical Colleges, Student Achievement Initiative
Wisconsin	Wisconsin Technical College System, Performance Funding
Wyoming	Legislature of the State of Wyoming, 2014 Budget Session, 62nd Legislature, HB0001 General Government Appropriations

(ENDNOTES)

i Organisation for Economic Co-operation and Development, "Education at a Glance 2013: Country Note–United States" (2013).

ii HCM Strategists, "The American Dream 2.0: How Financial Aid Can Help Improve College Access, Affordability, and Completion," (2013): 4.

iii Ben Casselman, "The Cost of Dropping Out: Millions Struggle With High College Debt and No Degree," *The Wall Street Journal*, November 22, 2012. http://www.wsj.com/articles/SB10001424127887324595904578117400943472068

iv Complete College America citation of American Institutes for Research, "Finishing the First Lap: The Cost of First-Year Student Attrition in America's Four-Year Colleges and Universities," (2010).

v Dennis P. Jones, National Center for Higher Education Management Systems, "Performance Funding: From Idea to Action," (2011): 1.

vi Mary McKeown-Moak and Christopher Mullin, Methods in Postsecondary Finance: Concepts and Calculations, as quoted in Southern Regional Education Board, "Essential Elements of State Policy for College Completion," (2012): 3.

vii Cheryl D. Blanco, Southern Regional Education Board, "Essential Elements of State Policy for College Completion: Outcomes-Based Funding" (2012): 2.

viii Dennis P. Jones, National Center for Higher Education Management Systems, "Outcomes-Based Funding: The Wave of Implementation," (2013): 10.

ix Kevin J. Dougherty and Vikash Reddy, "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 (2011): 3.

x Kevin J. Dougherty and Vikash Reddy, "Performance Funding for Higher Education: What Are the Mechanisms? What Are the Impacts?" ASHE Higher Education Report 39, no.2 (2013): 45–51. [Source applies to second through seventh bullets]

xi Ibid., 72-77.

xii Ibid., 79-82.

xiii Joseph Burke and Associates, *Funding Public Colleges and Universities for Performance: Popularity, Problems, and Prospects*. Albany: Rockefeller Institute Press (2002).

xiv Kevin Dougherty, "Performance Funding for Higher Education: Forms, Origins, Demise, and Impacts: Policy Implications." Presentation to National Conference of State Legislatures (2011).

xv Ibid.

xvi Kevin Dougherty and Esther Hong, "Performance Accountability as Imperfect Panacea: The Community College Experience." In Thomas Bailey and Vanessa Smith Morest (eds.), *Defending the Community College Equity Agenda*. Baltimore: Johns Hopkins University Press, (2006): 51-86.

xvii Dougherty and Reddy (2013).

xviii Dougherty and Reddy (2013).

xix Dennis P. Jones, National Center for Higher Education Management Systems, "Performance Funding: From Idea to Action," (2011): 4.

xx Due to limited availability of job placement and wage data in many states, these metrics may require more development.

xxi Kevin J. Dougherty, Rebecca Natow, Rachel Hare, and Blanca Vega, "The Political Origins of State-Level Performance Funding for Higher Education: The Cases of Florida, Illinois, Missouri, South Carolina, Tennessee, and Washington," *Community College Research Center*, (2011) http://ccrc.tc.columbia.edu/Publication.asp?UID=819

xxii Joseph Burke and Associates (2002).

xxiii Joseph Burke & Andreea Serban (editors), *Performance Funding for Higher Education: Fad or Trend?* (1998): see Chapter: State Synopses of Performance Funding Programs.

xxiv Dougherty and Reddy (2013).

xxv Dougherty and Reddy (2013).

xxvi Nancy Shulock, "Concerns About Performance-based Funding and Ways that States are Addressing the Concerns," California State University, Sacramento, Institute for Higher Education Leadership & Policy (2011).

xxvii Community College Research Center at Teachers College, Columbia University, "Policy Brief: Performance Funding: Impacts, Obstacles, and Unintended Outcomes" (2014).

xxviii Dougherty and Reddy (2013).

xxix David Wright, Tennessee Higher Education Commission. Personal conversation. September 9, 2014.

xxx Dougherty and Reddy (2013).