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Catalyst for Completion: Performance-Based Funding in Higher Education A case study of three states

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About NEBHE

The New England Board of Higher Education (NEBHE) was founded in 1955, when six visionary New England governors – realizing that the future prosperity of New England rested on higher education – committed their states to the shared pursuit of academic excellence. Soon thereafter, NEBHE was approved by New England's six state legislatures and authorized by the U.S. Congress. NEBHE works to promote greater educational opportunities and services for the residents of New England.

Performance-Based Funding: *funding models that incentivize graduation, not just enrollment*

With funding tied primarily to persistence and completion metrics, among other measures of performance, institutions in these states are incentivized to care much more for student success than for student quantity. State policymakers and leaders in higher education are focused on college completion in a manner nearly unprecedented in American history, with the call for a more educated citizenry ringing from the halls of the White House down through the academic quad. Yet, the gap between the stated goal and reality is wide: According to Complete College America, nearly one in two students pursuing a bachelor's degree will not obtain a college credential – and even lower graduation rates exist in our public community college system. Meanwhile, most states assign funding to colleges and universities based on enrollment numbers, with few incentives for completion, be it by semester, year or degree.

The performance-based models in motion in Ohio, Indiana, and Tennessee depart from the traditional philosophy that institutional funding be apportioned according to enrollment levels. Rather than rewarding institutions for simply enrolling more students, these states have anchored institutional appropriations to positive outcomes. Moreover, in a marked shift, these performance-based models are foundational; they are neither afterthoughts nor are they toothless. With funding tied primarily to persistence and completion metrics, among other measures of performance, institutions in these states are incentivized to care much more for student success than for student quantity.

Moving toward performance-based funding measures allows the state higher education system to continue to engage support for colleges and universities while promoting its egalitarian and societal benefits. However, many policymakers and key stakeholders have deep questions about performance-based funding models, and their intended and unintended consequences. The value of a college education continues to be in high demand, helping people attain success both socially and economically. College graduates additionally experience a host of other intrinsic benefits from a college education, such as lower rates of incarceration and higher rates of good health and charitable activity (Baum and Payea, 2004). States cannot ignore these social needs and a charge to develop human capital - a set of cultivated skills and knowledge that comes from education and training to create investments into society. However, the benefits of education are most fully realized, both economically and socially, when the experience and time culminates in the awarding of a degree, which acts as both a signal of acquired skills and development of human capital. Economic literature also supports the notion that development of human capital directly affects improvements in national and regional productivity and economic growth across various sectors and industries.

This policy brief examines three different state models that approach performance-based funding, with varying designs and strategies. In short, this brief aims to:

- Present the performance funding models of Ohio, Indiana, and Tennessee, including their strategies for implementation, their funding percentages, designs, and methodologies for calculating success.
- Learn more about the common patterns and idiosyncrasies of performance-based funding, including what states and institutions find rewarding and challenging about such measures.
- Analyze the current environment around performance-based funding in New England and place this information into a regional context.







OHIO

Aligning with a strategic plan to create a comprehensive performance funding system

Over the past two decades, Ohio's higher education system has included some form of performance-based funding – that is, a certain proportion of state appropriations to public institutions that has been based on performance in outcome areas like course completion, success in attracting and graduating at-risk students, and degree attainment.

In the early 1990s, Ohio had fallen to 41st nationally in per-student spending on higher education, and Ohio's in-state tuition had surpassed the national average by nearly 40%. In response, the Ohio Board of Regents appointed a task force that, after a three-year study, issued a report in 1992 entitled "Managing for the Future: Challenges and Opportunities for Higher Education in Ohio." This report called for shifting state appropriations from a model primarily driven by enrollment levels to one attuned to institutional performance. Specifically, the report sought to "secure resources to make higher education affordable" and to "work to ensure that state funding [provided] incentives for quality enhancements"

In 1996, Ohio created the Higher Education Funding Commission (HEFC) and worked to revamp performance-funding structures through its Core Performance Funding Plan. The HEFC created four challenge initiatives, as shown in the following box:



1. Access Challenge directed funds primarily to two-year institutions

2. Research Challenge gave state money in proportion to research dollars received

3. Jobs Challenge sought to improve business competitiveness among Ohio postsecondary institutions

4. Success Challenge apportioned funding according to institutional success in the four-year graduation of both "at risk" and overall student populations

The HEFC defined an "at-risk" student as any who was eligible for an Ohio Instructional Grant (OIG) – namely, students from low-income backgrounds. Students may be eligible for both OIGs and a federal Pell Grant. Like the Pell Grant, the maximum amount a student can currently receive from OIG is around \$5,500.

While the 1992 task force report initiated the push for performance funding, the complete transition has taken shape only recently. Matriculations to state institutions have continued to rise during the recession. Furthermore, weak degree completion and persistence rates complicate the use of enrollment data for the

Currently, Ohio determines state appropriations to public colleges and universities through its State Share of Instruction (SSI) formula. SSI seeks to reward efficiency, granting more money to campuses that keep costs below the national average.

establishment of funding levels. As of last year, the Ohio Board of Regents elected to create a new formula that would appropriate dollars based on colleges' ability to retain and graduate students. Ohio's former governor Ted Strickland spearheaded this effort as part of a 10-year strategic plan, and has championed a performance-based funding model aimed at graduating more students, keeping more graduates in Ohio, and attracting more

degree-holders from out of state.

Currently, Ohio determines state appropriations to public colleges and universities through its State Share of Instruction (SSI) formula. SSI seeks to reward efficiency, granting more money to campuses that keep costs below the national average. Included in the SSI formula are measures of course completion, success in attracting and graduating at-risk students, degree attainment, and a Science, Technology, Engineering and Math (STEM) course incentive. For four-year institutions, the SSI calculation, Success Challenge and Access Challenge appropriations, along with tuition subsidies from the state comprise the total amount of state funding. Two-year institutions also receive SSI and tuition subsidy funds, but are granted the lion's share of Access Challenge support.

Last year, four-year universities received \$1,394,359,127 in state appropriations, and community colleges received \$426,343,526. While state funding supports various campus programs as well as the instructional side of the university, funds are unrestricted, providing institutions with the flexibility to put monies toward improvements or initiatives deemed most appropriate for their respective campuses.

Additionally, at the community college level, the SSI calculation makes use of "momentum points," a model first adopted in the state of Washington. In Ohio, 10% of instructional funding is attached to meeting certain student goals, including the successful completion of developmental education, progress from remedial to college-level courses, and transfer to four-year institutions. The number of full-time equivalent (FTE) enrollees is also taken into account when determining total community college SSI allocations.

The switch from an enrollment-driven to a performance-based funding formula suggests a positive transformation for postsecondary education in Ohio. The at-risk component described above not only addresses issues of access for lowincome students, but also supports the retention and persistence of such students. Institutions with high at-risk populations are also granted more latitude with completion rates, allowing for non-selective institutions to continue providing for student access without the danger of losing state appropriations. Ohio's performance-based funding model recognizes both the importance of access and persistence—few states have so ably adopted and executed this type of framework.



Ohio reported the median time to degree for bachelor's degrees decreased from 4.7 years in FY 1999 to 4.3 years in FY 2003, and stayed at this level through 2007, according to the Lumina Foundation for Education. (Performance funding of graduates began in 1998.)

Ohio dedicates a large portion of its budget to subsidies for public colleges and universities, as part of a 10-year strategic plan to increase graduation rates, enroll more students and keep talent in the state. Yet, the fate of performance-based funding could be in jeopardy. In the midterm elections, former U.S. Rep. John Kasich (R) defeated incumbent Ted Strickland in the governor's race. As *Inside Higher Ed* reports, "some college officials worry more generally that Kasich, as a budget hawk in Congress, would take a different approach to higher education funding given Ohio's financial mess, declining to favor colleges and students as Strickland has." A new political agenda, new funding priorities, and state cutbacks to postsecondary education may influence the future of performance-based funding in Ohio.



INDIANA

Funding for course and degree completion with an emphasis on successful transfer rates and graduating low-income students.

Indiana's funding matrix moves 5% of the total state budget for higher education toward an incentivized structure, somewhat akin to the performance-funding model adopted in Ohio. Begun in 2007, Indiana's program – grouped with other initiatives commonly called "Reaching Higher" – is intended to establish the funding level that schools receive now and adjust their future funding depending on their ability to meet or exceed certain benchmarks.

When appropriating state money, schools are evaluated using the same benchmarks, regardless of institutional differences in mission or size. College completion and transfer student data figure prominently in the funding formula, and Indiana has elected to calculate enrollment levels at the end of the semester rather than at the beginning, in order to account for attrition.

College completion data rely on the number of degrees an institution awards, the number of "on-time" degrees conferred, and degrees for students from a low socioeconomic status (SES). These initiatives base different funding levels on year-to-year changes in the raw number of degrees awarded. For example, one additional degree awarded in each area would translate to a funding increase of \$5,000 per bachelor degree and \$3,500 per associate degree. If Indiana University-Bloomington were to graduate an additional student on time who also happened to be Pell-eligible, the university would realize \$15,000 in additional funding the following year.

It is worth noting that Indiana awards surplus funding regardless of how long students take to complete their degrees, whether or not they are classified as full-time or part-time, or if they transferred in. In order to be considered an "on-time graduate" a student must complete a bachelor's degree in four years and an associate degree in two years - a tight time-frame by traditional measurements in higher education.

Indiana already offers a financial incentive for community colleges to graduate their students and prepare them for transfer to a four-year university in the state funding model's financial incentive to graduate more students. Indiana, under the current paradigm, has similarly incentivized the acceptance of community college transfers on the university end by mandating that each matriculating transfer student nets the four-year college or university an additional \$1,500 in incentive funding.





Indiana's model shifts state funding from levels based on student population FTE at the beginning of the semester and moves it to the end of the semester. This places the focus of funding on course and credit completion as opposed to enrollment growth. Using a rolling average, the formula works by calculating the average credits completed over the previous four years (for example FY07, FY08, FY09, FY10) subtracted by the year prior to the first of the four years (in the example this would be FY06), then it is multiplied by \$3,500. Mathematically, the formula is as follows:

((FY07 + FY08 + FY09 + FY10)/4 - FY06) x \$3,500

This approach seeks to place emphasis not only on steady enrollment growth, but also on the university's continued support for students as they work towards course and degree completion.

Because students nationwide have a very low rate of completing college-level math or English coursework after remediation, Indiana has recommended the elimination of remedial offerings at its public colleges and universities. A research study of California community colleges suggested that just 10% of students in math and 25% in English attempt a college-level course after taking a remedial one. However, the study also demonstrated that students who were identified as needing remedial coursework were also 70% to 80% as likely to complete collegelevel coursework as students who were not identified as needing remediation. Students needing remedial instruction will receive it as enrolled students at the state's community colleges.





TENNESSEE

Approaching productivity funding from a whole new perspective, Tennessee likens its model to the "hydrogen-powered car"

Unlike the strategies in Ohio and Indiana, Tennessee's methodology diverts from a performance-funding approach and explores degree productivity from an entirely new perspective. Russ Deaton, director of fiscal policy and facilities analysis at the Tennessee Higher Education Commission (THEC), likens his state's newly adopted funding model to a "hydrogen-powered car" – an approach that has not been attempted before.

Prior to 2010, Tennessee, like Ohio and Indiana, had embraced performance funding for higher education and had overlaid a relatively small performance schema atop its preexisting appropriations formula: Approximately 60% of state money going to higher education was still tied to institutional enrollment figures. Performance funding in Tennessee, while it recognized positive institutional trajectory, failed to address the problems with a model fundamentally more attuned to quantity than measures of quality.

The current statewide agenda, while continuing to incorporate performance funding to some degree, seeks to refocus Tennessee priorities on a more outcomes-based higher education funding model. Signed into law in January 2010, the Complete College Tennessee Act cleaned the financial slate and mandated that a new funding formula be built that, at its heart, emphasizes student retention and degree completion over enrollment numbers.

Deaton and others at THEC hammered out such a model and began its phased introduction in fall 2010.

The new Tennessee model employs two similar but distinct funding formulae, one for universities and one for community colleges. Each formula assigns weights to separate scaled data points (10 data points for universities, 11 for community colleges) that tie outcome indicators like student retention, graduation rate and remedial success to institutional appropriations. Each institution still derives a certain percentage of its state funding from fixed-cost budget lines (on average, 15% for community colleges, 18% for universities). Under the new model, the lion's share of allocated money is based on institutional performance in identified outcome areas.

Campuses report raw data that are then scaled to render a translatable point value for each specified outcome. While this scaling, depending on the variable, can seem arbitrary, the underlying idea is clear: Data that are reported using different kinds of metrics (e.g. graduation rates, inbound research dollars, student progress) need to be converted to a single framework before outcomes can be evaluated collectively. The point values for each outcome area are summed and multiplied by the average faculty salary at Southern institutions with similar Carnegie classifications. The final step in the formula is to add in fixed-cost allocations (see Figure 1).

The scaling process has another distinctive feature: It grants a 40% premium on Pell-eligible students (i.e. a low-income student counts as 1.4 students in the formula). This emphasis could prove significant. For example, if UT-Knoxville were to grant 100 more bachelor's degrees to Pell-eligible students this year than it did last year, excluding the bump received due to an increased graduation rate, it would garner nearly \$1.4 million in extra funding. If each of those hypothetical students were Pell-eligible, on the other hand, the funding increase would total nearly \$1.9 million.

For the college completion agenda nationwide, the premium on lowincome student success in this model has the potential to encourage robust institutional support of such students. Tennessee has recognized that narrowing the achievement gap is central to the realization of its productivity goals and, as a result, has provided a monetary incentive to schools that succeed at caring for at-risk populations.

While the two basic formulae – one for universities and one for community colleges – are consistent across campuses, the weights attached to each data point differ from institution to institution. At a fundamental level, UT-Knoxville and East Tennessee State, for example, value research and retention very differently; Southwest Tennessee Community College does not place the same amount of importance on job placement as does Chattanooga State. The Tennessee model, while generally focused on similar outcomes, also allows for significant inter-institutional difference (see Figures 2 & 3).

The Tennessee model is as simple a structural framework as one could expect given disparate goals and general political inertia. It fundamentally changes the state funding paradigm from an input to an output basis. And while THEC and other state leaders have not elected to remove other sources of state money (e.g. performance funding or significant fixed facilities costs) wholesale from the framework, they have, to their great credit, involved institutional leaders in determining which outcomes will drive the vast majority of institutionspecific state appropriations. For example, more than three-quarters of state money allocated to UT-Knoxville this year will be tied to focus outcomes that will, after the weighting process, reflect its distinct institutional mission.

For political purposes and for want of a starting position, Tennessee has anchored the outputs of its formulae to previous appropriation levels for the time being; institutions will receive more-or-less the same amount of funding in 2011 as in 2010, despite the new underlying schema. The full force of the new model will be phased in over the next four years. The Tennessee approach is a game-changer, and its success or failure should be evident in short order. 4

Formulae used in the Tennessee Funding Model

Figure 1: University of	Tennessee-Knoxville Example	Funding Formula ¹
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Outcomes (2006-2007 to 2008-2009 Data)	Raw Data	Scaled Point Values	Weights	Weighted Point Values ²
Students Accumulating 24 hrs (Scale=1)	4,477	4477	2.0%	98.9
Students Accumulating 48 hrs (Scale=1)	4,671	4671	3.0%	156.2
Students Accumulating 72 hrs (Scale=1)	4,673	4673	5.0%	265.2
Bachelors and Associates (Scale=1)	3,742	3742	15.0%	660.4
Master's/Ed Specialist Degrees (Scale=0.3)	1,534	5112	15.0%	766.8
Doctoral / Law Degrees (Scale=.05)	403	8053	10.0%	805.3
Research and Service (Scale=20,000)	118,768,446	5938	15.0%	890.8
Transfers Out with 12 hrs (Scale=1)	794	794	5.0%	39.7
Degrees per 100 FTE (Scale=.02)	16.6	831	10.0%	83.1
Six-Year Graduation Rate (Scale=.04)	64.5	1612	20.0%	322.4
Total Points				4,089
Average faculty salary for similar institutions ³ Total Points			\$89,643 x 4,089	
Outcomes-based allocation		366,545,077		
Other appropriations ⁴		114,004,761		

^{1.} While the focus outcomes and the structure of the formula are correct – and while the numbers here were provided by the THEC – the specific figures used by the state may differ slightly.

\$480,549,800

^{2.} Including the 40% Pell Grant-eligible subpopulation premium

Total state appropriation

^{3.} Based on Carnegie classifications and salary data compiled by the Southern Regional Education Board

^{4.} Includes nearly \$23 million in continued performance funding and about \$92 million in fixed facilities and equipment replacement costs

Outcomes	UT - Knoxville	East Tennessee State
Students Accumulating 24 hrs	2.0%	3.0%
Students Accumulating 48 hrs	3.0%	5.0%
Students Accumulating 72 hrs	5.0%	7.0%
Bachelor's and Associate	15.0%	25.0%
Master's/Ed Specialist Degrees	15.0%	15.0%
Doctoral / Law Degrees	10.0%	7.5%
Research and Service	15.0%	12.5%
Transfers Out with 12 hrs	5.0%	5.0%
Degrees per 100 FTE	10.0%	10.0%
Six-Year Graduation Rate	20.0%	10.0%
Totals	100.0%	100.0%

Figure 2: University Outcomes and Example Weights

Figure 3: Community College Outcomes and Example Weights

Outcomes	Southwest Tennessee CC	Chattanooga State CC
Students Accumulating 12 hrs	4.0%	6.0%
Students Accumulating 24 hrs	5.0%	7.0%
Students Accumulating 36 hrs	6.0%	7.0%
Dual Enrollment	5.0%	5.0%
Associates	10.0%	5.0%
Certificates	20.0%	10.0%
Job Placements	10.0%	20.0%
Remedial & Developmental Success	20.0%	10.0%
Transfers Out with 12 hrs	5.0%	15.0%
Workforce Training (Contact Hours)	5.0%	10.0%
Awards per 100 FTE	10.0%	5.0%
Total	100.0%	100.0%





Performance-Based Funding Analysis

Most states do not often focus on productivity as a primary factor in determining funding for higher education. In most cases, public funding and appropriations for higher education place emphasis on enrollment numbers and encourage institutions to rapidly raise and spend revenue. The examples from these three states, while each have taken different approaches to performance-based funding, should draw a clear message: Financial incentives tied to college completion and productivity, through either single-track completion or through ease of transfer, can drive efficiency and cost-savings while dually rewarding quality and access. Dennis Jones, president of NCHEMS, argues that the inverse effect is true of current funding – that is to say that current "underperformance" is in part due to present state policies and funding measures. If degree attainment and college completion are to be major foci of a state's higher education agenda in the coming years, then alignment with performance-based funding is an important, if not requisite, action step.

Overall, performance-based funding in each of these three states promises positive results on the average. For example in Ohio, a report generated by the Board of Regents found that median time to degree had decreased while persistence and completion, especially for at-risk students, increased steadily. Each originated with clearly defined goals, such as: increasing the number of graduates in the state and bring spending into a defined framework. Institutions themselves are given some degree of flexibility regarding how to reach these goals, with emphasis placed on a transparent formula for colleges and universities to understand the direct incentives for completion. In each state, the formulae were kept explicitly simple, with a beginning set of easy to understand metrics and clearly defined paths toward rewarding completion via degrees awarded on time (not just graduation rates), that awards additional incentives for successful transfers, incentives for low-income and minority students, and incentives to reward current economic needs and meet job demands in the labor market Finally, each model has an emphasis on being sustainable. Complete College America recommends a modest beginning percentage of performance funding of 5% or higher, compounded over time (up to but not exceeding 50% of appropriation).

Performance-based funding models will not be implemented without some degree of pushback. By their very nature, such models do not hold underperforming institutions safe, and both losses and gains will be felt across the postsecondary system. Other states may view performance-based funding models as either too complex or too expensive - both problems which can be remedied by deliberately ensuring sustainability and simplicity as two clearly stated twin goals. While some states may view such systems as interfering with campus autonomy, it is also important to note that differences among institutions – through tools like benchmarking profiles – ought to be established to measure college completion success in a realistic and transparent way. Promoting collaboration across institutions and recognizing that a performance model must be brought to scale across the diverse environment of higher education are additional critical architectural steps necessary for success.

In New England, the six states are working to pursue performance-based funding differently. On balance, the region has not been a key leader in this area, whereas states in the South and Midwest have traditionally adopted performance-based funding measures at a much higher rate.

Current Performance-Based Funding Initiatives Across New England







Maine

The University of Maine system and its "nine strategic directions" plan contains a goal to enact performance-based funding, but does not provide any specific data, formulae, or other benchmarks regarding this goal. At present, the UMaine system does not have a template for performancebased funding. Its strategic plan does list performance-based funding as a direct priority, however, in its strategic vision for the system. Gov. Paul LePage pledged that he would make no cuts to higher education and aims to provide strong support for scholarship programs, proclaiming that higher education in the state must remain affordable and accessible.

New Hampshire

The University System of New Hampshire excels at measurement and public reporting of its efficiency and financial stewardship, but does not explicitly outline frameworks for accountability or performance-based funding measures. The multisystem governance structure in the state allows for enhanced autonomy but lacks a statewide funding mechanism to incorporate accountability into the budgeting process. The New Hampshire Postsecondary Education Commission reports degree production numbers across the state, but that information is not expressly tied into performance-based funding at the legislative level. Gov. John Lynch has cited the efforts made between higher education and business around areas of innovation and economic development.

Vermont

While Vermont's higher education accountability information is focused primarily on institution-level results, the state does not explicitly tie performance to funding. The state system does well at publicly releasing timely and useful information about each institution across multiple years and comparisons to peer averages but none of Vermont's accountability information provides explicitly stated goals for performance, targets, or funding mechanisms for college completion. Gov. Peter Shumlin, in his state of the state address, noted his concerns over mounting student debt in the state and called for a higher education income tax credit that would help Vermont residents reduce their student loan debts.



Current Performance-Based Funding Initiatives Across New England



Massachusetts

The commonwealth features one of the highest educational attainment rates in the nation and, at present, there is no formal link between budgeting and performance in the public higher education system. While the Vision Project takes great steps toward linking outcomes and performance, performancebased funding has not been established in the state. Gov. Deval Patrick has allocated funding to the Dept. of Higher Education to establish a performance-based funding system in FY2011. In Massachusetts, tuition revenue goes back to the state, while campuses control fee revenue.



Connecticut

Connecticut is the only state in New England that has undergone any type of formal performance-based funding, originating in 1985. The program is fairly small in scope and its future seems uncertain. The state's accountability structure is well suited to incorporate performance-based funding given that performance goals are embedded into institutions overall planning. Gov. Dannel Malloy's proposal to completely overhaul the university system may yield some changes with regard to performance-based funding. In his budget address, Gov. Malloy articulated his imperative for colleges to possess greater flexibility, with more students graduating on time.



Rhode Island

Rhode Island does not outwardly link data to a variety of performance indicators, though the state does provide historical data on postsecondary education. The state does not directly link performance with funding and its master plan enumerates goals that may find itself in step with performance-based funding, such as improving participation and graduation rates in higher education.

Recommendations

This policy brief aims to make three points about performance funding:

- Performance-based funding is a necessary component of the college completion agenda. Although there are multiple ways at arriving to a formula that works with the mix of state institutions, political realities, available funding and sector, the current "business-as-usual" formulae focus too heavily on enrollment only. Switching to a model that ties funding to performance must be given heavy consideration.
- 2. **Good performance-funding measures share common elements**: the inclusion of a clearly-defined goal; institutional flexibility; sustainability; a modest percentage of the budget dedicated to performance; and features that allowed for greater incentives to align workforce demand and attract low-income, minority, and transfer students.
- 3. No New England state has yet to completely link performance with funding. But many elements necessary for a performance-based system seem present, with nearly all of the states looking toward cost-savings and college completion as two important features in their FY2011 plan for higher education

For policymakers:

- Dedicate 5% of funding that compounds annually to go toward a performance-based system. A modest percentage is critical to sustainability and a cumulative effect will prove to act as a large enough incentive for most colleges and universities.
- Align a system that emphasizes completion and degree production in key areas for economic growth in the state. Providing measures to develop human capital in targeted industries using a performance-based system is likely to attract the attention of businesses, labor, and new employers to the state.
- Keep any new system simple less is more. Beginning with focused, readily
 understood goals targeted on college completion will yield the most change with
 minimal effort. Thinking of performance-based systems here as a type of "minimum
 effective dose" ought to be the way to proceed.

For Institution leaders / boards / college presidents:

- Help states develop quality indicators of performance anchored at degree completion, including a system that rewards progress moving from year-to-year, counting enrollment on the last day of class, and ensure that systems give institutions and boards the flexibility to distribute this performance funding after legislatures appropriate the funds.
- Use the opportunities presented in performance-based systems to help close the attainment gap by including incentives for populations in the state that could benefit from both equity and economic advantages.



