STATE OF MISSOURI PERFORMANCE FUNDING FOR HIGHER EDUCATION

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BACKGROUND

National

The history of performance funding nationally began with the question of accountability on campuses – how much oversight is needed, and who maintains institutional standards of excellence? Since the 1980s, performance-based accountability has taken three forms: Performance funding, which links state funds directly to how an individual campus does on performance metrics; performance budgeting, which is less formulaic and rigorous, but still takes into consideration a college's outcome; and performance reporting, which does not tie into funding at all but is reported to policy makers and the public who can then hold the schools accountable in different ways.

In recent years, there has been a strong push towards performance funding for higher education. As a result, 24 states – Arizona, Arkansas, Florida, Hawaii, Illinois, Indiana, Kansas, Louisiana, Maine, Massachusetts, Michigan, Minnesota, Mississippi, New Mexico, Nevada, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Tennessee, Texas, Utah and Washington – have adopted performance metrics for the allocation of funding, the majority of which apply to both two- and four-year institutions. Five additional states – Colorado, Georgia, Montana, South Dakota and Virginia – are in the process of creating their own performance funding model which will be adopted upon completion. These numbers are drastically different even from 2013. That year, only 12 states had implemented a performance funding system, while four were in the process of adoption.

State

Missouri has a history of allocating additional state resources on the basis of performance through the Funding for Results program from the late 1990s. However, there was no visibility or implementation strategy for performance funding between then and 2011, with the exception of the unsuccessful budget requests for pilot projects that the Coordinating Board brought forward in the late 2000s. With national trends in higher education finance moving towards a greater emphasis on performance driving the allocation of state dollars, the time was right for Missouri to revisit performance funding and develop a new model.

The HEF model, the Coordinating Board's existing funding policy, is predicated on a stable and adequate base funding. With the state funding situation being characterized by core cuts in bad years, and no increases in better years between 2007 and 2011, there were no adjustments in the base for differential enrollment increases, changes in program mix or inflationary costs that must be borne by institutions.

While there was activity in the strategic initiative component of the HEF model, the performance funding component was the least developed, prompting the Commissioner of Higher Education to establish the Performance Funding Task Force in early 2011. The Task Force's recommendations were adopted the following year by the Coordinating Board for Higher Education, and legislation has since been adopted that closely follows those recommendations.

IMPLEMENTATION OF PERFORMANCE MEASURES

In the development of their respective sets of performance indicators, each sector sought measures with certain key characteristics. These characteristics include:

1. Reliance on existing and externally validated data
2. Alignment with established statewide goals
3. Being straightforward in nature and easily understood

Legislation codifying the performance funding process was passed during the 2014 legislative session as part of SB 492. The core funding for each institution would begin as what was appropriated in fiscal year 2015, and at least 90 percent of any increase to that core funding would come from institutional success on adopted performance measures (see Performance Measures for more information). The remaining ten percent of any increase is distributed to address funding inequities within each sector using an equity formula developed by each institutional sector. What is earned becomes the new core funding level, and the process repeats as new funding becomes available.

Performance Measures

The current model contains five performance indicators for each institution, and institutions could earn one-fifth of the increase in funding allocated to performance by demonstrating success on one of its five measures. If an institution demonstrates success on two measures, then it would earn two-fifths of the money, etc., while an institution succeeding on all five measures would receive 100% of the performance funding increase.

SB 492 (2014) requires the addition of a sixth performance item "to measure student job placement in a field or position associated with the student's degree level and pursuit of a graduate degree." Because this type of measure is not widely used in performance funding models found in other states, best practices have not been established, and there is virtually no available information on incorporating this measure into such a system. As a result, FY 2016 is a pilot year to assess the validity of the methodology for gathering the needed data and provide sufficient time to assess the need for – and make – necessary improvements. No funding will be allocated based on performance on this measure until FY 2019.

Successful Performance

Most performance measures are evaluated based on a three-year rolling average with success being defined for each institution individually as improvement over that institution's performance from the previous year. The base year for each measure is also a three-year average, and all numbers are reported in tenths.

While a three-year rolling average was adopted to smooth out any changes in the related rates or numbers, it was discovered that an anomalous year, high or low, could negatively impact an institution for years to come. As a result, another avenue for success was adopted beginning in FY 16. This option, a year-over-year comparison, may only be chosen by an institution in the year following a failure to demonstrate improvement using the three year rolling average method. Once chosen, this method must be used until the anomalous year has passed or a requested change has been approved.

The final component of successful performance is sustained excellence, which is measured compared to an established benchmark rather than improvement over the previous year. This component acknowledges that institutions that have achieved a level of excellence on a particular measure have little room for improvement but should be encouraged to sustain this high level over time. Performance in the top third of the relevant comparator group is the threshold for sustained excellence for all institutions. However, for the "Improvements on professional/occupational licensure tests" measure, sustained excellence is considered to have been met with a passage rate of 90 percent or above, and sustained excellence for the assessment in general education and major field measures is dependent upon the institution's admissions selectivity category. If external benchmarks for sustained excellence are not established for a particular measure, then improved performance over the previous year using the three-year rolling average is the method used to evaluate success on that measure.

STEM, Health and Allied Health Weighting

In order to recognize their growing importance in the workforce, the model incorporates a special weighting factor for STEM, Health and Allied Health completions into any existing measure where applicable and appropriate, including measures that involve actual degree completions such as completion rates and total degree production.

STEM fields include a wide range of disciplines, and there are different ways to identify the disciplines included in STEM. For example, the National Science Foundation defines STEM fields broadly, including not only mathematics, natural sciences, engineering and computer and information sciences, but also social/behavioral sciences such as psychology, economics, sociology and political science. A similar but somewhat narrower list is published by the federal Immigration and Customs Enforcement agency that deals with student visas. In April of 2011, the National Center for Education Statistics issued a report entitled, "Postsecondary Awards in Science, Technology, Engineering and Mathematics, by State: 2001 and 2009," that used some, but not all of the fields published by ICE. Thus, there is not one generally accepted list of STEM instructional programs used by the federal government or the higher education community. For our purposes, the STEM fields closely mirror the ones used by the NSF and in the NCES study but add fields of particular importance to Missouri such as agriculture, natural resources/conservation, STEM education fields and health professionals.

STEM Fields for Missouri Performance Funding (by CIP code):

- 01- Agriculture, agriculture operations and related sciences
- 03- Natural resources and conservation
- 10- Communication technologies/technicians and support services
- 11- Computer information sciences and support services
- 13- Education (STEM-related: 13.0603, 13.1309, 13.1311, 13.1316, 13.1319, 13.1320, 13.1321, 13.1322, 13.1323, 13.1329, 13.1335)
- 14- Engineering
- 15- Engineering technologies and engineering-related fields
- 21- Technology education/industrial arts
- 26- Biological and biomedical sciences
- 27- Mathematics and statistics

29- Military technologies and applied sciences
30- Interdisciplinary Studies (STEM-related: 30.0101, 30.0601, 30.0801, 30.1001, 30.1801, 30.1901, 30.2501, 30.3201)
40- Physical sciences
41- Science technologies/technicians
47- Mechanic and repair technologies/technicians

Health and Allied Health Fields for Missouri Performance Funding (by CIP code):
51- Health and Allied Health

It is important that the model recognize the contributions community colleges make toward STEM graduates by also giving weight to their AS and AAS STEM, Health and Allied Health graduates.

Each STEM graduate is given an additional 50 percent weight in the 'Total Degrees Awarded' measure. An example to illustrate how this works for a given institution is provided below:

- Total graduates, 2014 – 500 in all fields, 30 in STEM fields
- Thus, the total number of 2011 STEM-weighted graduates counted for performance funding would be 500 + (30 * 0.5) = 500 + 15 = 515.

Change Process

Although consistency of measures over time is a crucial factor in the validity of the performance funding process, there must be a process for periodic revision to components of the model in order to reflect changes at institutions and in the broader environment. Because these changes may not coincide with the three-year review window, this section describes the process that must be followed to request and receive approval for changes to various components of the model.

In order to ensure maximum transparency for the change process, all requested changes must be submitted to and approved by the Coordinating Board for Higher Education. As a result of the lead time necessary for changes to be reflected in data reports, proposals for change must be approved by CBHE at or before its regular June meeting. For proposals that require a comment period, those materials must be delivered to the MDHE office by May 1.

Four-year institutions and State Technical College of Missouri are allowed to change peer groups each year by applying to MDHE. Once the new peer group is received, it will be posted online for at least two calendar weeks for comment from other postsecondary institutions and interested parties. The package is then considered, and a recommendation is submitted for approval to CBHE.

Both two- and four-year institutions are also allowed to change their institution-specific measure every three years by applying to MDHE. Once the new measure is received, it will be posted online for at least two calendar weeks for comment from other postsecondary institutions and interested parties. The package is then considered, and a recommendation is submitted for approval to CBHE. Review may occur more frequently, however, due to extenuating circumstances.

In addition, four-year institutions may apply to change between measure options where available (i.e., from freshman-to-sophomore retention rate to first-time, full-time freshmen successfully completing 24 hours in their first academic year or vice-versa). MDHE will review applications

every three years, but the change will not go out for peer review or to CBHE for approval, as all measures have already been adopted and approved by the board. Should a request to change the measure be made outside the regular three-year cycle, a recommendation to CBHE will be submitted.

PUBLIC TWO-YEAR INSTITUTION PERFORMANCE PLAN

Based on recommendations from the Missouri Community College Association, the following performance indicators were adopted for all community colleges:

Student Success and Progress

1. Three-year completion rate for first-time, full-time entering students, including students who successfully complete* a certificate or degree of at least one year or longer or successfully transfer to a four-year institution
2. Percentage of developmental students who successfully complete* their last developmental English course and then successfully complete* their first college-level English course
3. Percentage of developmental students who successfully complete* their last developmental math course and then successfully complete* their first college-level math course.

Increased Degree Attainment and Quality of Student Living

4. Percentage of career/technical graduates who pass their required licensure/certification examination

Financial Responsibility, Efficiency and Affordability

5. Addressed with institution-specific measures (see page 8)

Graduate Outcomes

6. TBD

Success on each measure is defined as improvement over the previous year's performance (both measured with three-year rolling averages), year-over-year improvement or, where applicable and appropriate, sustained performance in the top third of the National Community College Benchmarking Project.

… … …

Comparator Group

The comparator group chosen by public two year institutions is the National Community College Benchmarking Project – a comprehensive national data collection and reporting consortium designed for two year colleges with over 280 colleges participating nationwide, including all Missouri community colleges – or other externally validated benchmark.

*'Successfully complete' as defined by the institution

PUBLIC TWO-YEAR INSTITUTION PERFORMANCE PLAN, INSTITUTIONAL MEASURES

Public two-year institutions are addressing the financial responsibility and efficiency component of the model with institution-specific measures. Below is the measure chosen by each respective institution:

Crowder College: Tuition and fees + state appropriations per FTE

East Central College: Tuition and fees as a percent of statewide median household income

Jefferson College: Tuition and fees per FTE

Metropolitan Community Colleges: Tuition and fees as a percent of median Kansas City MSA household income

Mineral Area College: Tuition and fees + state appropriations per FTE

Missouri State – West Plains: Number of credit hours completed per $100,000 of state appropriations calculated as a three-year rolling average – success is an increase in this ratio

Moberly Area Community College: Tuition and fees plus state appropriations plus local appropriations per FTE

North Central College: Percentage of students enrolled at an institution in the fall term who return/re-enroll for the subsequent spring term

Ozarks Technical Community College: Tuition and fees + state appropriations per FTE

St. Charles Community College: Percentage of students enrolled at an institution in the fall term who return/re-enroll for the subsequent spring term

St. Louis Community Colleges: Tuition and fees as a percent of median St. Louis MSA household income

State Fair Community College: Percentage of full-time students enrolled at an institution in the fall term who return/re-enroll for the subsequent spring term (excluding those who graduated prior to the spring term)

Three Rivers Community College: Tuition and fees + state appropriations per FTE

PUBLIC TECHNICAL COLLEGE PERFORMANCE PLAN

The following performance indicators were adopted for the State Technical College of Missouri:

Student Success and Progress

1. Three-year graduation rate
2. Freshman-to-sophomore retention rate

Student Placement and Quality of Student Learning

3. Job placement (180 day follow-up)
4. Improvements in assessments in the major field

Financial Responsibility and Efficiency

5. Completions to FTE Ratio

Success on each measure is defined as improvement over the previous year's performance (both measured with three-year rolling averages), year-over-year improvement or, where applicable, sustained performance relative to an external benchmark (see below).

… … …

Comparator Group

The comparator group chosen by State Technical College of Missouri is a national group of 13 public technical colleges with similar program mix that do not issue degrees or certificates in Arts and Humanities. The comparator group for job placement and learning assessment measures is all Missouri two-year institutions.

Note: Because the existing performance plan for State Technical College of Missouri already incorporates a job placement component, the institution will establish a sixth measure consistent with its mission, which will be implemented concurrently with the 6th measure for other sectors.

PUBLIC FOUR-YEAR INSTITUTION PERFORMANCE PLAN

Based on recommendations from the Council on Public Higher Education, the following performance indicators were adopted for public four-year colleges and universities:

Student Success and Progress

1. Freshman-to-sophomore retention rate OR
2. First-time, full-time freshmen successfully completing* 24 hours in their first academic year

Increased Degree Attainment

3. Total degrees awarded (weighted for STEM and Health awards) OR
4. Six-year cohort graduation rates

Quality of Student Learning

5. Improvements in assessment of general education OR
6. Improvements in assessments in the major field OR
7. Improvements on professional/occupational licensure tests**

Financial Responsibility and Efficiency

8. Percent of total education and general expenditures expended on the core mission (instruction, research and public service) OR
9. Increase in educational revenue (state appropriations plus net tuition revenue) per full-time equivalent student at or below the increase in the consumer price index

Mission specific measure

10. Addressed with institution-specific measures (see page 11)

Graduate Outcomes

11. TBD

Success on each measure is defined as improvement over the previous year's performance (both measured with three-year rolling averages), year-over-year improvement or, where applicable, sustained performance relative to an external benchmark.

… … …

Comparator Group

Public four-year institutions operationalized the establishment of external benchmarks by each delineating a group of comparator institutions. These peer groups represent an external comparison and in nearly all cases were established for internal purposes prior to the development of the performance funding model (see page 12).

*'Successfully complete' as defined by the institution

**Excludes teacher certification until next review in 2017.

PUBLIC FOUR-YEAR INSTITUTION PERFORMANCE PLAN, INSTITUTIONAL MEASURES

Public four-year institutions are addressing the fifth component of the model with institution-specific measures. Below are the common measures chosen by each respective institution (in parentheses) and the institution's mission-specific measure:

Harris-Stowe State University (2, 3, 6, 9): External funding received by the institution as a percentage of state appropriations

Lincoln University (2, 3, 5, 8): First-year retention of first-time, full-time students residing in residential halls

Missouri Southern State University (1, 3, 7, 9): Number of students enrolled in a learning community each fall semester

Missouri State University (2, 4, 7, 8): Increased number of graduates in STEM, health care and other critical disciplines of need in the future workforce

Missouri Western State University (1, 4, 5, 8): The number of students each year who have participated in research, projects or creative activities that have resulted in a peer-reviewed publication, presentation, performance, exhibit or external award

Northwest Missouri State University (1, 4, 5, 8): Percent of full-time, first-time degree- or certificate-seeking undergraduate students receiving institutional grant aid

Southeast Missouri State University (1, 3, 7, 8): The percentage of academic programs delivered with a direct instructional expense per credit hour below the mean of the peer group using a rolling three-year average

Truman State University (1, 4, 6, 8): Increased performance of seniors in high-impact practices

University of Central Missouri (2, 3, 5, 8): Number of graduates earning degrees in professional and applied technology disciplines

University of Missouri (1, 4, 7, 8): Science and engineering expenditures sponsored by business and industry

PUBLIC FOUR-YEAR INSTITUTION PERFORMANCE PLAN, PEER GROUPS

The public four-year institutions have chosen their own comparator groups as follows:

Harris-Stowe State University:

- A set of institutions with similar demographics

Lincoln University:

- All public land-grant four-year Historically Black Colleges and Universities with an enrollment between 1,000 and 5,000

Missouri Southern State University:

- A set of 31 institutions with similar demographics

Missouri State University:

- The Coalition of Urban and Metropolitan Universities

Missouri Western State University:

- The Integrated Postsecondary Education Data System (IPEDS) list of open admission, public institutions with the Carnegie classification of baccalaureate or higher that have similar budget size and student enrollment

Northwest Missouri State University:

- A set of 35 Public Master's I institutions with a similar freshmen ACT score, faculty salary and degree program mix (including education)

Southeast Missouri State University:

- A pre-existing group of fifteen institutions that Southeast uses for IPEDS-based internal research and comparisons
- For institutionally-developed performance funding measures, the comparator group will be the large, Master's level universities from the University of Delaware study of instructional costs and productivity.

Truman State University:

- The Council of Public Liberal Arts Colleges

University of Central Missouri:

- Fifteen institutions from the West North Central region of the American Association of University Professors Category IIA (Master's), which have comprehensive organization characterized by diverse post-baccalaureate programs – including first-professional – but do not engage in significant doctoral-level education

University of Missouri:

- Top third of public doctoral institutions, which apply to three of the four common measures: freshman-to-sophomore retention rate, six-year graduation rate and percentage of total E&G spent on core mission