

Coordinating Board for Higher Education
Missouri Department of Higher Education

Performance Funding Model



Recommendations of the Performance Funding Task Force
April 5, 2012

Background

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 since 2007 there have been no adjustments in the base for differential enrollment increases, changes in program mix, inflationary costs that must be borne by institutions, etc.

- Thus the Performance Funding Task Force finds it imperative that its recommendations first acknowledge that the current base funding levels for Missouri public institutions are universally inadequate and, in some members' opinion, inequitable, and new investments in base funding should continue to be the top priority for the Coordinating Board in advocating for increased appropriations for higher education.

While there has been activity in the strategic initiative component of the HEF model, the performance funding component has been the least developed, prompting the commissioner to establish the Performance Funding Task Force in early 2011.

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 has been no visibility or implementation strategy for performance funding since then with the exception of the unsuccessful budget requests for pilot projects that the Coordinating Board has consistently brought forward. 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.

Recommendations

The task force recommends the following for a performance funding model:

- 1) Consistent with the vision of the governor, the task force recommends that FY13 be established as the baseline year for data collection and building of support for establishing performance funding with funding first being requested for the FY14 budget. This year will also be used to continually evaluate the selected measures to ensure that they are reasonable and the associated data is available, valid, and reliable. The task force recommends that the Coordinating Board remain open to revisions to the selected measures if for some reason one or more is found to be unworkable. It is also recommended that all measures will be reviewed for continued appropriateness and relevance at least every three years.
- 2) The task force recommends that all performance measures be 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, or, when applicable, maintenance of a high level of performance in relation to a previously established and externally validated threshold. The base year for each measure will itself also represent a three-year average, and all numbers will be expressed in tenths.
- 3) Performance funding will apply to a portion of new appropriations from the state, and it will not be applied to existing base appropriations. Institutions will have the same complete flexibility regarding spending decisions with the money provided through performance funding as exists with current state appropriations. Furthermore, funding earned through performance in one year will be added to an institution's base the following year. Consequently, the task force recommends that the total funding allocated on the basis of performance will not exceed approximately 2-3% of an institution's total state funding in any given year.
- 4) Each institution will use five performance indicators. Therefore, institutions can earn one-fifth of its available increase in funding by demonstrating success on one of its five performance measure. 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 its available increase in funding.

RECOMMENDED 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) Straight-forward in nature and easily understood.

PUBLIC 2- YEAR INSTITUTIONS

The Missouri Community College Association has recommended the adoption of the following performance indicators for all community colleges:

Student Success and Progress –

- 1) Three-year completion rate for first-time, full-time entering students.
This measure includes students who successfully complete a certificate or degree of at least one year or longer, or successfully transfer to a 4-year institution.
- 2) Percentage of developmental students who successfully complete their last developmental English course, who then successfully complete their first college-level English course.
- 3) Percentage of developmental students who successfully complete their last developmental math course who then successfully complete their first college-level math course.

Increased Degree Attainment and Quality of Student Learning

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

Financial Responsibility and Efficiency

- 5) Public 2-year institutions is addressing the financial responsibility and efficiency component of the model with institution-specific measures.

Success on each measure will be defined as improvement over the previous year's performance (both measured with three-year rolling averages) or, where applicable and appropriate, sustained performance in the top third of the National Community College Benchmarking Project (NCCBP), or other externally validated benchmark. Measures 1, 2, and 3 are part of the NCCBP, a comprehensive national data collection and reporting consortium designed for two-year colleges with over 280 colleges participating nationwide, including all Missouri community colleges.

Financial Responsibility and Efficiency Measures – Public 2-year Institutions

Public 2-year institutions is 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 – number of credit hours completed per \$100,000 of state appropriations (success is an increase in this ratio)
- East Central College – expense and general (E & G) expenditures per credit hour completed (success is a reduction in this ratio)
- Jefferson College – number of credit hours completed per \$100,000 of state appropriations (success is an increase in this ratio)
- Metropolitan Community Colleges – instructional expense per credit hour (success is an increase in this ratio or maintenance in the top third of the NCCBP)
- Mineral Area College – number of credit hours completed per \$100,000 of state appropriations (success is an increase in this ratio)
- Moberly Area Community College – 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)
- North Central College – number of credit hours completed per \$100,000 of state appropriations and local tax collections (success is an increase in this ratio)
- Ozarks Technical Community College – number of credit hours completed per \$100,000 of state appropriations (success is an increase in this ratio)
- St. Charles Community College – persistence rates for incoming fall, full-time and part-time students (success is an increase in this rate)
- St. Louis Community Colleges – Budgeted revenue per actual credit hour would include all types of revenue received by the college in a fiscal year (success is a decrease in this ratio)
- State Fair Community College – number of credit hours completed per \$100,000 of state appropriations and local tax collections (success is an increase in this ratio)
- Three Rivers College – number of credit hours completed per \$100,000 of state appropriations and local tax collections (success is an increase in this ratio)

PUBLIC TECHNICAL COLLEGE

Linn State Technical College has recommended the adoption of the following performance indicators:

Student Success and Progress

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

Student Placement and Quality of Student Learning

- 3) Job placement (180 day follow-up)
- 4) Improvements in assessments in the major field, and/or
- 5) Improvements on professional/occupational licensure tests

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

PUBLIC 4-YEAR INSTITUTIONS

The Council on Public Higher Education has recommended the adoption of the following performance indicators:

- 1) Student Success and Progress (institutions will choose one):
 - a) Freshman to sophomore retention, or
 - b) First-time, full-time freshmen successfully completing 24 hours in their first academic year.
- 2) Increased Degree Attainment (institutions will choose one):
 - a) Total degrees awarded, or
 - b) Six-year cohort graduation rates
- 3) Quality of Student Learning (institutions will choose one):
 - a) Improvements in assessments of general education, or
 - b) Improvements in assessments in the major field, or
 - c) Improvements on Professional/occupational licensure tests
- 4) Financial Responsibility and Efficiency (institutions will choose one):
 - a) Percent of total education and general expenditures expended on the core mission (instruction, research, and public service), or
 - b) 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.
- 5) In order to recognize and provide incentives for continued improvement in mission-specific areas, each institution will choose one institution-specific measure to be approved by the Coordinating Board.

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

Institution-Specific Measures – Public 4-year Institutions

The recommendations delivered to the Board in December included four performance measures for every institution. In addition to those four, the model requires an institution-specific measure for each institution. Several institutions submitted their proposed measures ahead of the December meeting but there was not enough time for those measures to be sufficiently analyzed and included in the recommendation at that time. Institution-specific measures listed here have been reviewed by MDHE staff:

- Harris-Stowe State University - External funding received by the institution as a percentage of state appropriations.
- Lincoln University - The percentage of students in the freshman cohort who successfully complete English 101 within the first three semesters of enrollment.
- Missouri Southern State University – Percentage of students in the freshman cohort who are successfully retained after participating in a first-year learning community.
- Missouri Western State University – 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.
- Truman State University- Improved critical thinking as measured through the senior capstone experience.
- Southeast Missouri State University – The percent 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.
- Missouri State University – Increased number of graduates in STEM, health care and other critical disciplines of needed in the future workforce.
- University of Central Missouri – Number of graduates earning degrees in professional and applied technology disciplines.
- **Northwest Missouri State University – PENDING**
- University of Missouri – Federally financed research and development expenditures as reflected in (1) total Federally financed R&D expenditures, (2) the percentage share (market share) of all dollars expended that year, or (3) the rank of the university.

Sustained Excellence

The second component is the establishment of benchmarks upon which sustained excellence could be measured to constitute success in lieu of improvement over the previous year for public 4-year institutions and Linn State. 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. If external benchmarks for sustained excellence are not established for a particular measure, or the threshold is not met by an institution, then improved performance over the previous year using the three year rolling average will be the sole method used to evaluate success on that measure. The task force recommends that performance in the top third of the relevant comparator group be the threshold for sustained excellence for all institutions.

Public 2-year Institutions:

The community colleges previously established the National Community College Benchmarking Project as their comparator group for the sustained excellence component of the model.

Public 4-year Institutions and Public Technical College:

Public 4-year institutions and Linn State operationalized the establishment of the thresholds by each delineating a group of comparator institutions. These peer groups represent an external benchmark and in nearly all cases were established for internal purposes prior to the development of the performance funding model.

- Missouri State University – comparator group will be the Coalition of Urban and Metropolitan Universities, which has been used by the institution as a comparator group for over 10 years.
- Lincoln University – comparator group will be all public 4-year HBCUs with an enrollment between 1,000 and 5,000.
- Linn State Technical College – comparator group is a national group of fifteen technical colleges with a similar program mix that do not issue degrees or certificates in Arts and Humanities. Comparator group for job placement and learning assessment measures will be all Missouri two-year institutions.
- Harris-Stowe State University – comparator group will be a set of institutions with similar demographics to Harris-Stowe: Coppin State University, Alabama State University, Johnson C. Smith University, Kentucky State University, South Carolina State University, Clark Atlanta University, Lincoln University, Missouri Southern State University and Missouri Western State University.
- Missouri Western State University – comparator group will be the IPEDS list of open admission, public institutions with the Carnegie classification of baccalaureate or higher.

Western uses this group of institutions as a comparison group for many internal measures.

- **Northwest Missouri State University – PENDING**
- Southeast Missouri State University – comparator group for state measures shall be a preexisting 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 – comparator group is the Council of Public Liberal Arts Colleges (COPLAC). This has been the peer group used by Truman State for most internal accountability measures for many years.
- University of Central Missouri – comparator group is fourteen institutions from the West North Central region of AAUP Category IIA: Comprehensive institutions characterized by diverse post-baccalaureate programs (including first-professional), but do not engage in significant doctoral-level education.
- University of Missouri – comparator group is the public doctoral institutions. This peer group applies to three of the four common measures: freshman to sophomore retention rate, 6-year graduation rate, and percent of total E&G spent on core mission. For the professional licensure measure, for which there is no national data by institutional level, the comparator group will be Missouri public four-year institutions.

STEM Weighting

The final component was the incorporation of a special weighting factor for STEM completions into any existing measure where applicable and appropriate. It is recommended that institutions be given the option of having the STEM weighting incorporated into all measures that involve actual degree completions such as completion rates and total degree production.

It is important that the model recognize the contributions community colleges make toward STEM graduates beyond their own AS and AAS STEM graduates. This requires a component to account for transfer and AA students who eventually earn STEM bachelor's degrees at Missouri public universities. Thus the task force also recommends that the STEM weighting for community colleges also include any student who receives a STEM degree from a public university and had transferred in 30 hours or more from a community college.

Each additional STEM graduate over the relevant baseline will be given an additional 50 percent weight in each measure. Here's an example to illustrate how this would work for a given institution:

- Total graduates, 2011 - 500
- Total graduates, 2012 - 515 (of the 15 additional graduates, 4 were in STEM fields)
- The new STEM graduates would count as 6 graduates (4×1.5), rather than 4.
- Thus the total number of 2012 STEM-weighted graduates counted for performance funding would be 517, rather than 515 if there was no weighting.

Determination of STEM Fields

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 such social/behavioral sciences as psychology, economics, sociology and political science. A similar and somewhat narrower list is published by federal Immigration and Customs Enforcement 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 no one generally accepted list of STEM instructional programs used by the federal government or the higher education community. For this recommendation regarding performance funding, the STEM fields to be used closely mirror the ones used by the NSF and in the NCES study but adds fields of particular importance to Missouri such as agriculture, natural resources/conservation and the STEM education fields.

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: 13.063, 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

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