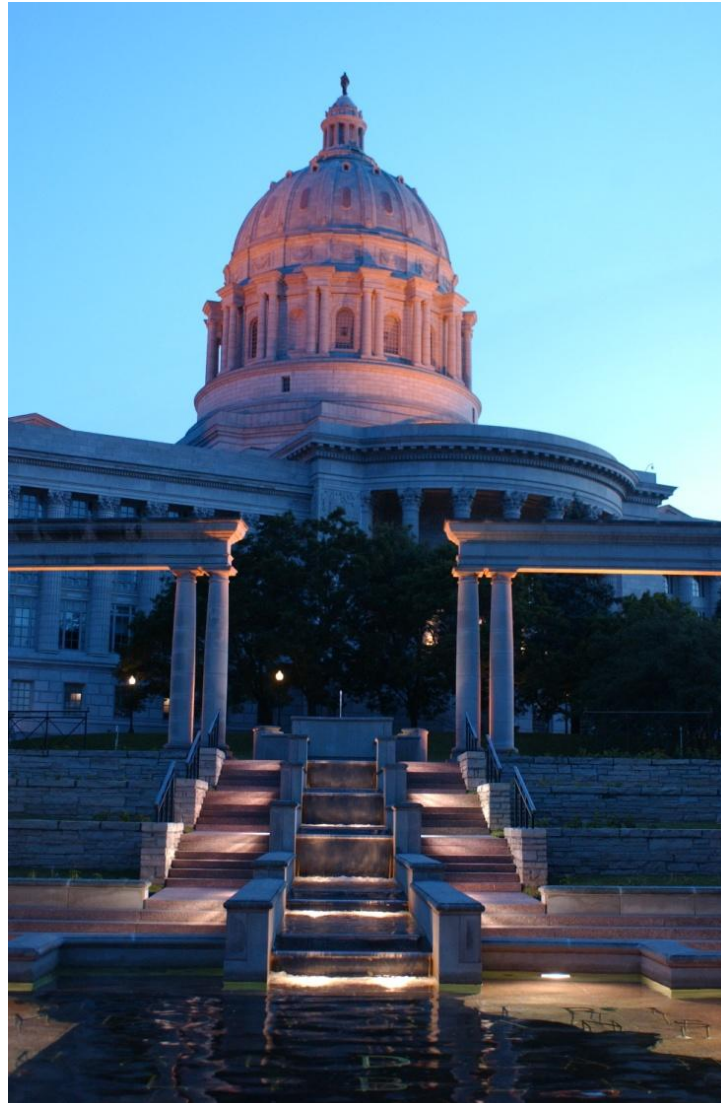


A FUNDING MODEL FOR HIGHER EDUCATION IN MISSOURI



Final Report
Submitted to the Missouri General Assembly
by the
Joint Committee on Education

February 26, 2013

Joint Committee on Education

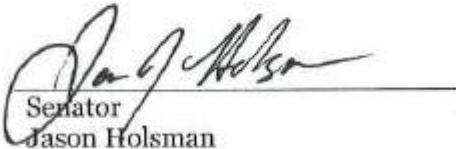
Rm. 502, State Capitol Building
Jefferson City, MO 65101
(573) 522-7987



Senator
David Pearce, Chair



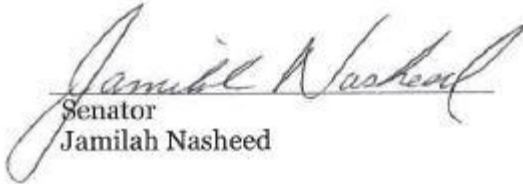
Representative
Mike Lair



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Representative
Ira Anders



Senator
Jamilah Nasheed

Representative
Steve Cookson



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Kurt Schaefer



Representative
Mike Thomson

Executive Summary

HB 1731 (2012) directed the Joint Committee on Education to develop a model for appropriating funds to public higher education institutions. The committee undertook the charge by framing the discussion around priorities, goals, and accountability.

Development of the proposed model was done with a knowledge of Missouri's history of higher education funding, funding disparities, and past efforts to reform funding practices. In addition, Missouri is one of many states with previous experience using performance funding and a resurgence in interest in funding strategies that emphasize institutional outcomes over inputs.

This model was informed by numerous sources including recent initiatives of the higher education institutions and the Department of Higher Education; research from academia, national education policy organizations, and national higher education organizations; archived documents from previous commissions and taskforces; and public testimony given at the Joint Committee on Education Fall 2012 hearings; and public comment submitted on drafts of the proposal.

The model considers the adequacy of core appropriations to the institutions as well as performance outcomes demonstrating that institutions are meeting the needs of the state. Missouri institutions are divided into sectors by Carnegie classification, and public institutions in ten states with a per capita personal income level closest to Missouri were used as peer institutions. Cost estimates for core expenditures are calculated in standard expenditure categories of instruction, research, public service, academic support, student services, and institutional support. All but research are calculated using comparative data from peer institutions.

Performance measures are incorporated into the model through the use of completed course hours in the calculation of instructional costs, as well as through the performance funding goals and metrics developed by the higher education institutions as members of a performance funding taskforce.

The model acknowledges both the collective and mission-specific contributions that institutions make to the educational and economic well-being of Missouri. The model provides a rational basis for the appropriation supporting operational expenditures and provides incentives to institutions to meet goals and sustain excellence.

Introduction

Throughout the 2012 session and prior, discussions of higher education funding within the General Assembly have addressed state financial support of higher education institutions, current and past funding levels, institutional missions, and performance outcomes.

HB 1731 (2012) charged the Joint Committee on Education with developing “a comprehensive funding formula for Missouri public institutions of higher education by December 31, 2013. The General Assembly shall implement a funding formula beginning in fiscal year 2015.”¹

The Joint Committee on Education held three hearings in Fall 2012 at which public testimony was presented. The committee heard from university and college presidents, university faculty, higher education association directors, and Department of Higher Education staff. The testimony of witnesses covered a range of issues and informed the development of the proposed funding model. (See Appendix A for a complete list of witnesses.) An initial draft of the proposal was presented on December 10, 2012, and the committee requested public comment through December 31.² A revised draft and simulation of funding needs was presented on February 4, 2013. The committee again requested public comment on the revised proposal through February 11.³ Information from the hearings and public comment periods was incorporated into the final report.

Objectives

Postsecondary education serves numerous purposes in the advancement of knowledge from targeted vocational training to cultivating the next generation of leaders and innovators in broad courses of study. Beyond educating students, higher education institutions contribute to the state through research, entrepreneurial endeavors, community support, and partnerships with industry.

The objectives for a comprehensive approach to state funding of higher education institutions are to

- Provide a rational basis for core funding.
- Provide incentives for performance outcomes.
- Invest Missouri’s financial resources to support Missouri’s goals for higher education.

¹ SS SCS HCS HB 1731 (2012).

² Comments were submitted by Linn State Technical College, Missouri State University, Missouri Western State University, Truman State University, University of Missouri System, Missouri Community College Association, Council on Public Higher Education, and Missouri Department of Higher Education.

³ Comments were submitted by Lincoln University, Linn State Technical College, Missouri State University, Truman State University, University of Central Missouri, University of Missouri System, Missouri Community College Association, Council on Public Higher Education, and Missouri Department of Higher Education.

Policy experts recommend that states' higher education funding strategies should have strong ties to state policy and economic development goals, focus on outcomes, and be easily understood and accessible to interested parties (Wall, Frost, Smith, & Keeling, 2008). In 2010, the Educated Citizenry 2020 Committee released a report outlining the goals necessary for preparing a well-educated, well-prepared citizenry for the future of Missouri. One of the committee's stated goals was to increase attainment of postsecondary degrees and credentials to 60% for all adults. Achieving this goal requires increased retention and graduation rates, as well as engaging a broader range of students.

In addition, HB 1042 (2012) called for improved practices in remediation, a core course library to facilitate smoother transfers between institutions, and a policy to support reverse transfers, which will all contribute to increased numbers of Missourians with postsecondary degrees and credentials.

The public hearings held in Fall 2012 provided an opportunity to begin a dialogue on higher education funding from a fresh perspective. To shift the paradigm, the committee directed testimony to establishing priorities and targeting the subsidy the state provides to higher education institutions to incentivize the outcomes that are most beneficial to the state.

A Missouri model for funding higher education institutions should reflect the values and principles that provide answers to these questions:

- What are the essential functions of higher education?
- What are the similarities and differences in the role of higher education institutions from the various sectors?
- What are the shared goals of the institutions? What are their unique goals?
- How can higher education institutions most effectively contribute to Missouri's educational and economic policy goals?
- What are the indicators that higher education institutions are serving Missouri well?

At each of the hearings, institution presidents highlighted many of the accomplishments of their institutions both as contributions to statewide goals and fulfillment of their unique missions⁴. Even in those institutions with similar missions, each institution must work to meet the needs of the population it serves. For example, Dr. Marsha Drennon, president of State Fair Community College, and Dr. Mark James, president of Metropolitan Community College, made a joint presentation to the committee in order to highlight the differences between rural and urban community colleges and how they serve the needs of their communities.

Dr. Troy Paino, president of Truman State University, emphasized that as Missouri's public statewide liberal arts institution, TSU serves a vital role in cultivating leaders,

⁴ Six institutions have specific missions in state statute. (See Appendix B for a list of those institutions and missions.) Other institutions' missions have been formalized through approval by the CBHE.

problem solvers, and producers of new knowledge. Dr. Paino identified developing minds, increasing personal and social responsibility, and strengthening the economy as essential to TSU's mission.

The hearings also highlighted the breadth and depth of the role of higher education institutions. In testimony to the committee, University of Missouri System President Tim Wolfe told the committee that UM's hospitals and clinics annually provide the state with \$60 million in unreimbursed healthcare. ABC Laboratories, anchor for the Discovery Ridge research park south of Columbia, was founded by an MU professor and currently employs 367 people. University of Missouri Extension Centers operate in all Missouri counties and assist communities with health, education, and public safety.

Dr. Bruce Speck, president of Missouri Southern State University, testified to many of the accomplishments of MSSU and the successes of MSSU graduates. Dr. Speck wrote in the closing to his written testimony: "In my estimation, not only has higher education in Missouri served the state well in the past, but also the state relies upon higher education to continue serving the intellectual, economic, social, and cultural needs of the future...Providing students with an education is an opportunity for students to improve their lives, and we are improving the lives of Missourians one student at a time."

Further, the hearings revealed the varying perspectives among the institutions on how best to divide the state appropriation to higher education institutions. Dr. Brian Long, then Executive Director for the Council on Public Higher Education, told the committee that COPHE members support performance funding and agree with the recommendations of the Higher Education Performance Funding Taskforce. (A complete description of the charge to the taskforce is included on page 4.) Dr. Chuck Ambrose, president of the University of Central Missouri, said in his testimony that UCM "wants to be resourced up against our results." Community college presidents also expressed support of performance funding. Dr. Neil Nuttall, president of North Central Missouri College, noted that many of the performance measures Missouri community colleges elected to use in the HEPF Taskforce report were based on participation in the National Community College Benchmarking Project.

However, COPHE members were not in unanimous agreement on the appropriation for core budgets, specifically any new revenue not directed to performance funding. Discussion among the members continues to focus on "perceived inequitable base funding, significant enrollment changes, program mix, and mission related costs" (Dr. Brian Long, written testimony). Dr. Robert Vartabedian, president of Missouri Western State University, stated in his written testimony: "[I]n those years institutions receive additional state funding, it is provided in the form of a percentage increase to a base appropriation for each institution. In theory, that makes sense. In reality, it creates a growing chasm between those institutions with large base appropriations and those...with smaller bases."

Recent History of Higher Education Funding in Missouri

Missouri's current practice of appropriating incremental increases to an institution's prior year appropriation has not evolved with institution-specific changes either in terms of inputs (e.g., increased enrollment) or outcomes (e.g., increased degree completion).

Missouri first introduced performance funding nearly 20 years ago. In the mid 1990s following the work initiated by Dr. Charles McClain, then Commissioner of Higher Education, as well as the recommendations of the Missouri Business and Education Partnership Commission and the Taskforce for Critical Choices in Higher Education, Missouri introduced two new funding strategies: Mission Enhancement Funding and Funding for Results (Dougherty, Natow, Hare, Jones, Sosanya M., & Vega, 2011; Missouri Business and Education Partnership Commission, 1991; Taskforce on Critical Choices for Higher Education, 1992).

These programs were funded in conjunction with the informal process for calculating an institution's core budget request to the legislature. Neither the core calculation method nor the performance initiatives were codified in statute. The Funding for Results appropriation peaked at 1.6% of the state funding to higher education institutions. Both initiatives were abandoned by the early 2000s for lack of revenue, and budget requests since have been based on uniform incremental adjustments to the previous year's funding (Dougherty et al., 2011).

Interviews with key stakeholders at the time of implementation of Funding for Results revealed that higher education institution officials found the support for performance funding "ranged between mildly supportive to decidedly negative" (Dougherty et al., 2011, p. 28). Those who resisted performance funding saw it as an intrusion on their academic autonomy, a threat to the core appropriation to which they had become accustomed, and a bureaucratic requirement that did not fully acknowledge the contributions of individual institutions (Dougherty et al., 2011).

SB 389 (2007) directed the Coordinating Board for Higher Education to submit a new model for funding higher

Higher Education Funding in Missouri, 1989-2012

1989 – Commissioner of Higher Education Charles McClain directs DHE staff to research and review the concept of performance funding.

1991 – Missouri Business and Education Partnership Commission report recommends utilizing performance funding mechanisms.

1992 – Taskforce on Critical Choices for Higher Education report recommends that CBHE budget requests incorporate incentives for performance and apply targeted funds to mission-related initiatives and improvements in institutional performance.

1994 – Funding for Results performance funding is implemented, and funding is appropriated through 2002.

1997 – Mission Enhancement Funding is implemented, and funding is appropriated through 2002.

1998 – Missouri Commission on the Affordability of Higher Education is established.

2002 – House Subcommittee on Appropriations – Higher Education Funding Equity is established. Public hearings held. No final report filed.

2007 - Governor Blunt offers a three-year plan to increase funding to higher education by \$112 million (12.6%) over 3 years. Increases were funded in FY08 and FY09. FY10 higher education appropriation remains flat per a tuition freeze agreement between Governor Nixon and the higher education institutions

2007 – SB 389 enacted. Requires CBHE to develop a new funding model to submit to JCED by August 2010.

2007 – CBHE/MDHE convenes the Higher Education Funding (HEF) taskforce.

education to the Joint Committee on Education by August 28, 2010.⁵ Following the passage of SB 389, a workgroup of COPHE members wrote a series of white papers which utilized standard education and related expenditure categories. At the same time, DHE convened a Higher Education Funding Taskforce. The final report of the HEF Taskforce presented a funding approach that merges expenditure categories and creates weighted full-time equivalent student enrollments which seek to remedy funding differences primarily in terms of enrollment changes over time. According to the report “funding gaps” in institutions’ core funding would be remedied only with additional revenue beyond the previous year’s appropriation plus inflationary increase. The HEF Taskforce recommendation called for 96-98% of funding to be based on core funding with the remaining 2-4% divided between strategic initiatives and performance funding. The HEF model was conditioned on additional new revenue which was not appropriated.

In 2010, Governor Jay Nixon hosted a Higher Education Summit for leaders of Missouri’s higher education institutions. In his opening address he identified four key areas on which he asked institution leaders to focus: attainment, academic program review, cooperation and collaboration, and funding. In his remarks on funding, he called for reevaluating the HEF model submitted in 2008 in favor of a funding model focused on outcomes rather than inputs (“Governor Nixon’s Remarks at Higher Education Summit Dinner,” 2010).

The CBHE convened the HEPF Taskforce to develop a revised model. The final report of the taskforce, approved by the CBHE in April 2012, recommended that no part of the current core appropriation be dedicated to performance funding. They recommended that any new revenue be divided so that half would be attributed to inflationary increases and half would be directed toward performance funding, not to exceed 3% of core funding. Each year any inflationary increases and performance funding would be added to the previous year’s core so that each year performance funding would be predicated on only new revenue (Coordinating Board for Higher Education, 2012).

2008 – HEF taskforce submits report to CBHE. HEF recommendation was for an approach which would guarantee 96-98% of the previous year’s funding plus inflation. Upon the legislature appropriating funds to meet that requirement, additional new funding would be directed toward strategic initiatives and performance funding, in that order of priority. Implementation of the HEF recommendations was predicated on new funding which was not appropriated.

2010 – HEF Taskforce report presented to JCED per SB 389 (2007).

2010 – Governor Nixon holds first Higher Education Summit and charges higher education institutions with revising current funding approaches and the 2008 HEF proposal. Governor Nixon said the 2008 proposal would *“need a second look and possible revision...it needs to put more emphasis on specific institutional missions and performance and less on existing costs.”*

2010 – CBHE/MDHE convenes the Higher Education Performance Funding Taskforce.

2011 – MDHE presents SB 389 (2007) performance measures to Joint Committee on Education. Concurrently, the HEPF Taskforce works to develop a different set of metrics.

2012 – HEPF Taskforce submits final report to the CBHE recommending that performance funding be based on only new revenue which will not be considered part of core funding and which will not exceed 3%.

2012 – HB 1731 charges the Joint Committee on Education with developing a comprehensive funding model for higher education.

⁵ Section 160.254.4(9), RSMo.

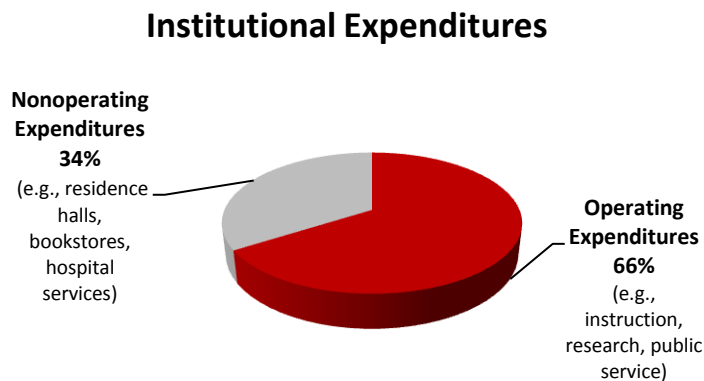
Model Considerations and Variables

While a Missouri higher education funding model will be developed to support the state's goals, several common criteria are prevalent in research articles and reports on higher education funding models. According to the research, a good model will be

- Clear and easily understood both conceptually and technically.
- Unbiased in relation to quantifiable factors.
- Responsive to the unique needs and missions of institutions.
- Valid, reliable, and consistent.

A model should be responsive to institutional differences without overcompensating for them. In addition some desired elements of a model may naturally have some degree of conflict (e.g., simplicity versus equity, flexibility versus stability). Therefore, a key consideration is balance (Layzell, 2007; McKeown-Moak, 1999).

Additionally, an institution's complete revenue needs are not meant to be captured by a funding model. Nor is it the expectation that the state is responsible for meeting 100% of an institution's revenue needs. In public four-year institutions in the United States, operating expenditures account for an average of 66% of an institution's overall expenditures. In public two-year colleges, the operating expenditures represent 79%.⁶



In a model that considers costs, a critical component is identifying the variables that will give the most accurate indication of operational needs. Although quantitative measures may not account for the quality of individual programs across or within institutions, a good funding system is designed with an awareness of the different sectors, institutional

missions, and student population. A funding model that distinguishes between classifications of institutions based on variations in mission and program offerings will result in different average per pupil funding levels at institutions, but it supports vertical equity—the unequal treatment of unequals (McKeown & Layzell, 1994). Because of the variation in expenditures across sectors within higher education, a reasonable component to incorporate into a funding model would be calculations that utilize an institution's peers within a sector and would not make unreasonable or unfair comparisons across sectors.

⁶ National Center for Education Statistics based on 2006-07 data, the most current year of final national data reported.

Performance Funding

In addition to cost-based approaches to funding, a number of states have tried some degree of performance funding for higher education. Few have been able to sustain the practice most often due to a lack of funding, resistance from institutions, or loss of support from key stakeholders. With lack of funding, not only was the issue that the percentage of performance funding was small—typically less than five percent of funds allocated to higher education institutions—but the funding was considered supplemental to core funding making it easier to eliminate in difficult budget times. Performance funding is also more vulnerable to budget cuts when it is a budget proviso not codified in statute (Bogue & Johnson, 2010; Carey & Alderman, 2008; Dougherty & Natow, 2009; Layzell, 2007).

Developing a Missouri Funding Model

While Missouri is not alone in its renewed interest in performance funding, many of the states pursuing more aggressive performance funding models have an established history of some methodology for funding higher education. Missouri has operated on primarily a base plus model for several decades. That, coupled with Missouri's decentralized statewide governance of higher education, has allowed for institutions to grow enrollments and alter missions in very different ways resulting in considerable variation in core funding.

Before Missouri can look exclusively to performance outcomes to determine state aid to institutions, there must be a reasonable level of confidence that the base level of support is guided by sound rationale and is calculated to reflect the current mission of an institution and the population of students the institution serves.

To that end, the core operational expenditures of Missouri's institutions may be calculated on a combination of outcomes and costs. Six categories of common core operational expenditures are widely used in higher education: instruction, research, public service, academic support, student support, and institutional support (McKeown & Layzell, 1994)⁷. Core operating expenditures do not include such things as hospitals, auxiliary enterprises, residence halls, bookstores, or other revenue-generating operations. (See Table 1.)

Instruction represents the largest percentage of education and related expenditures. For states that incorporate instruction expenditures into their funding models, distinguishing instructional costs by level and discipline of course hours delivered is a common practice (McKeown & Layzell, 1994; McKeown-Moak, 1999; Mullin & Honeyman, 2008).⁸ The National Center for Higher Education Management Systems

⁷ Prior to FY2010, there were seven primary expenditure categories. In FY2010, the previous category of Operations and Maintenance was absorbed into the other six categories.

⁸ In many other countries, tuition and fees vary based on degree program. In at least fourteen Organization for Economic Cooperation and Development (OECD) countries, higher education institutions charge differentiated tuition rates based on higher costs of operating some programs. In other OECD countries, tuition and fees are lowered in high demand areas to attract students to those fields (OECD Publishing, 2012).

and the Delaware Cost Study have presented methods for creating a matrix by which to weight levels and disciplines.

A simple way to shift the focus from input to outcome in the category of instruction is to use end-of-semester enrollment (i.e., completion) to determine weighted student credit hours. In the proposed model sector peers are defined as public institutions in the same broad Carnegie 2010 Basic Classification in the five states above Missouri and five states below Missouri in per capita personal income as measured by the U. S. Bureau of Economic Analysis. (See Appendices C and D for additional demographic and finance information on state finance and sector categories.)

Linn State Technical College serves a unique role in Missouri as the only statewide associate's degree-granting institution offering exclusively technical programs. Because of the state's identification of LSTC as a sector separate from other Missouri associate's degree institutions, LSTC has a peer group of institutions with similar missions, degree programs, and credentials offered.

The weights used for student credit hours were derived from the matrix developed by the COPHE workgroup in 2007 which was based on data from the Delaware Cost Study and the research of Howard Bowen. (See Appendix E.)

Reaching the goal of 60% of the adult population of Missouri having a postsecondary degree or credential will require extending opportunities beyond the current student population. For those institutions whose low-income student population exceeds the threshold derived from sector peers, a scaled weighting will be applied to the instructional category total.⁹

To minimize fluctuation calculations in core operational expenditure categories should be based on three-year rolling averages using final data from the Integrated Postsecondary Education Data System (IPEDS)¹⁰. Because of changes in the way IPEDS data are reported, FY2015 calculations would use final data from FY2010 and FY2011. For FY2016 and beyond, three-year rolling average would be used. The student credit hour weights for discipline and level should be reevaluated every five years and any necessary adjustments made.

As noted previously, the state subsidy to higher education institutions is only one source of revenue. Therefore the state will not seek to subsidize the full estimated operating budget of the institutions. The state share of the operating budget will be determined by using a multiplier derived from the state appropriation as a percentage of operating expenditures according to sector peers. (See Table 2.)

Should the funding model calculation result in an amount lower than the appropriation provided to an institution in FY2014, the institution would be eligible to receive 98% of

⁹ The percentage of enrolled undergraduate students who are eligible for a federal Pell Grant will be used as the measure of low-income. The percentage by which an institution exceeds the sector threshold will be the additional weight added to calculated instructional costs.

¹⁰ IPEDS is a part of the National Center for Education Statistics overseen by the U.S. Department of Education.

the FY2014 appropriation, provided all performance measures are met. In the following year, an institution's model calculation will be compared to 98% of the FY2014 funding level, and the institution will be funded at whichever is higher. In all subsequent years, the model calculation will be compared to 98% of the previous year's 98% until all institutions reach the point of the model calculation being the higher amount.

Table 1. Core Operational Expenditures

	Expenses Covered	Calculation
Instruction	Faculty salaries and benefits, office supplies, academic department administration, plus research and public service not separately budgeted	<p><i>Instruction = Standardized rate per credit hour × weighted student credit hours</i></p> <p><i>(Instruction expenditures ÷ unweighted credit hours for each institution within a sector. Sector median used as the standardized rate.)</i></p> <p><i>Final Instruction Calculation = Instruction calculated total × scaled weighting for percentage of low-income students.</i></p>
Research	Separately budgeted research and centers	<i>Research = Sponsored research expenditures incurred by the institution in the prior fiscal year × .25</i>
Public Service	Conferences, public broadcasting, community services	<i>Public Service = Median of sector peers' public service expenditures by headcount × institution headcount.</i>
Academic Support	Libraries, computer labs, museums, dean's offices	<i>Academic Support = (instruction + research + public service) × sector peers' median percentage for academic support expenditures relative to sum of instruction + research + public service expenditures.</i>
Student Services	Admissions, registrar, academic advising, career services, financial aid administration, and student activities	<i>Student Services = Median of student services expenditures by headcount for sector peers × headcount for each institution.</i>
Institutional Support	General administrative services, executive management, legal operations, fiscal operations, human resources, data systems, and other central operations	<i>Institutional Support = (Instruction + Research + Public Service + Academic Support + Student Services) × sector peers' median percentage for institutional support expenditures relative to expenditures in the other five categories.</i>

Incorporating Performance Funding

In April 2012, the HEPF Taskforce presented its final report to the Coordinating Board for Higher Education. The recommendations contained within it were the product of 18 months of work by the taskforce. Each institution identified five measures that reflect both statewide, sector-specific, and institution-specific goals and determined the standards and outcomes required to meet each goal. (See Appendix F.) These measures will serve as the performance funding component of the comprehensive funding model. Each of the five measures will be determined as met or not met, therefore allowing for 0, 20, 40, 60, 80, or 100 % of performance funding to be earned.

This model will call for 90% of the state share of the operating budget estimate to be the core appropriation. The remaining 10% will be appropriated contingent upon the number of performance measures met.

Table 2. Proposed Model Framework

State Share of Operating Budget Estimate¹¹

(Instruction + Research + Public Service + Academic Support + Student Services + Institutional Support)

× sector specific modifier

= State Share of Operating Budget Estimate¹²

Incorporating Performance Funding

90% of the state share of the operating budget estimate will be automatically included in the appropriations request.

The remaining 10% of the state share of the operating budget estimate will be based on performance funding earned (0, 20, 40, 60, 80, or 100%).

Appropriation Using the Funding Model

Should available revenue be insufficient to meet each institution's calculated state share of the operating budget estimate, any institution whose target funding level does not exceed 100% of the prior year's appropriation will receive a share of new revenue proportionate to the institution's percentage of the overall funding shortfall. For

¹¹ Should the state share of the operating budget estimate need to be adjusted to meet available appropriations, 10% of the appropriation will be reserved and appropriated according to performance funding earned.

¹² Community colleges will use the same calculation as above with an adjustment for a portion of local revenue to be deducted from the final calculation.

whatever prorated funding level an institution is eligible to receive, 10% will be distributed based on performance measures met.

Other Considerations

Missouri community colleges currently have a method for distribution of the state appropriation for the sector, but they do not use a funding model to determine the sector's budget request to the state. The proposed higher education funding model determines the amount of the appropriation to community colleges. Provided community college funding continues to be appropriated as one sum, the proposed funding model will not affect the distribution method described in the MCCA formal written agreement from July 2012.

In addition, although institutions' appropriations requests will be determined by the funding model, the final appropriation made to an institution will not delineate specific dollar amounts within expenditure categories. The funding model is intended to give the legislature a basis for the appropriation, not to dictate the way in which funding is spent. In addition, the model will identify target funding levels for the institutions.

Finally, because of the additional weighting added in the instruction expenditure category of the model, the calculated target grand total should not be interpreted as the amount by which Missouri is underfunding institutions. The difference between current appropriations and the model's targets for institutions is best interpreted as a component of the process for determining how to distribute revenue through the model.

Note on Community College Local Revenue

The committee did not have unanimous agreement on the deduction of half of local revenue from the final calculation for the community colleges. Some members noted that the deduction of a portion of local revenue could be a disincentive to voters to support their local community colleges.

Not to consider local revenue as a source of public revenue exclusive to community colleges would call for any new funds to be distributed through the model at approximately double the percentage the community colleges currently receive.

Conclusion and Recommendations

In FY2012, the Missouri General Assembly appropriated \$854 million to thirteen public four-year institutions and fourteen public two-year institutions. For several years, the core appropriation for institutions has been based on historic funding levels with no consideration of an institution's success in fulfilling its mission or its contribution to the goals of the state. In addition, appropriations to institutions in the recent past have not accounted for significant changes to institutions' enrollment or mission. Past efforts at performance funding in Missouri were short lived and were abandoned in difficult budget times and with the loss of key supporters.

The proposed higher education funding model is based on best practices in public policy and identifies an appropriate level of state support to higher education institutions without working specifically to the benefit or detriment of any individual institution or sector.

This comprehensive model draws upon ideas generated by the 2007 HEF Taskforce and incorporates the elements of the performance funding model developed by the 2010 HEPPF Taskforce. The model includes both inputs (core operating expenditures) and outcomes (performance measures) and is *not* controlled by historic funding levels and inflationary increases.

The model makes reasonable effort to minimize large shifts in funding by using three-year rolling averages in both core operating expenditure categories and performance funding. Where sector medians are used, the model uses appropriate peer groups for comparison based on a nationally recognized system of classification. Further, the model uses public institutions of higher education in states with a per capita personal income level most comparable to Missouri.

The funding model must carefully balance the complexity needed to reflect the differences in institutions while remaining straightforward and transparent. No model will capture all of the nuanced distinctions between institutions; this model reflects institutional needs based on rational, tangible criteria.

Any reasonable funding model will evolve as the needs of the state, the students, and the institutions change. Therefore, a regular review process involving stakeholders from the General Assembly, CBHE, DHE, and Missouri's public higher education institutions is recommended to ensure that the needs of Missouri's citizens and institutions of higher education continue to be met.

Appendix A – Public Hearing Witness List

September 25, 2012 North Central Missouri College, Trenton		
Witness	Title	Affiliation
Paul Wagner	Deputy Commissioner	Department of Higher Education
Zora Mulligan	Executive Director	Missouri Community College Association
Neil Nuttall	President	North Central Missouri College
Troy Paino	President	Truman State University
John Jasinski	President	Northwest Missouri State University

October 23, 2012 University of Central Missouri, Warrensburg		
Witness	Title	Affiliation
David Russell	Commissioner	Department of Higher Education
Paul Wagner	Deputy Commissioner	Department of Higher Education
Brian Long	Executive Director	Council on Public Higher Education
Charles Ambrose	President	University of Central Missouri
Robert Vartabedian	President	Missouri Western State University
Connie Hamacher	Interim President	Lincoln University
Zora Mulligan	Executive Director	Missouri Community College Association
Mark James	Chancellor	Metropolitan Community College
Marsha Drennon	President	State Fair Community College
Cheryl Riley	President	Faculty Senate, University of Central Missouri

November 14, 2012 Missouri University of Science & Technology, Rolla		
Witness	Title	Affiliation
Tim Wolfe	President	University of Missouri System
Albert Walker	President	Harris-Stowe State University
Clif Smart	President	Missouri State University
Bruce Speck	President	Missouri Southern State University
Ken Dobbins	President	Southeast Missouri State University
Jon Bauer	President	East Central Missouri College
Don Claycomb	President	Linn State Technical College
Myrtle E.B. Dorsey	Chancellor	St. Louis Community College

Appendix B – Institutions with a Statutory Mission

Linn State Technical College

Section 178.636, RSMo.

1. Linn State Technical College shall be a special purpose institution that shall make available to students from all areas of the state exceptional educational opportunities through highly specialized and advanced technical education and training at the certificate and associate degree level in both emerging and traditional technologies with particular emphasis on technical and vocational programs not commonly offered by community colleges or area vocational technical schools. Primary consideration shall be placed on the industrial and technological manpower needs of the state. In addition, Linn State Technical College is authorized to assist the state in economic development initiatives and to facilitate the transfer of technology to Missouri business and industry directly through the graduation of technicians in advanced and emerging disciplines and through technical assistance provided to business and industry. Linn State Technical College is authorized to provide technical assistance to area vocational technical schools and community colleges through supplemental on-site instruction and distance learning as such area vocational technical schools and community colleges deem appropriate.

2. Consistent with the mission statement provided in subsection 1 of this section, Linn State Technical College shall offer vocational and technical programs leading to the granting of certificates, diplomas, and applied science associate degrees, or a combination thereof, but not including associate of arts or baccalaureate or higher degrees. Linn State Technical College shall also continue its role as a recognized area vocational technical school as provided by policies and procedures of the state board of education.

Missouri Southern State University

Section 174.231. 1., RSMo.

On and after August 28, 2005, the institution formerly known as Missouri Southern State College located in Joplin, Jasper County, shall be known as "Missouri Southern State University". Missouri Southern State University is hereby designated and shall hereafter be operated as a statewide institution of international or global education. The Missouri Southern State University is hereby designated a moderately selective institution which shall provide associate degree programs except as provided in subsection 2 of this section, baccalaureate degree programs, and graduate degree programs pursuant to subdivisions (1) and (2) of subsection 2 of section 173.005. The institution shall develop such academic support programs and public service activities it deems necessary and appropriate to establish international or global education as a distinctive theme of its mission. Consistent with the provisions of section 174.324, Missouri Southern State University is authorized to offer master's level degree programs in accountancy, subject to the approval of the coordinating board for higher education as provided in subdivision (1) of subsection 2 of section 173.005.

Missouri State University and Missouri State University-West Plains

Sections 174.450.2

The governing board of Missouri State University, a public institution of higher education charged with a statewide mission in public affairs, shall be a board of governors of ten members, composed of nine voting members and one nonvoting member, who shall be appointed by the governor, by and with the advice and consent of the senate. The nonvoting member shall be a student selected in the same manner as prescribed in section 174.055. At least one but no more than two voting members shall be appointed to the board from each congressional district, and every member of the board shall be a citizen of the United States, and a resident of this state for at least two years prior to his or her appointment. No more than five voting members shall belong to any one political party. The term of office of the governors shall be six years, except as provided in this subsection. The term of office for those

appointed hereafter shall end January first in years ending in an odd number. For the six voting members' terms that expired in 2011, the successors shall be appointed in the following manner:

174.500.2, RSMo.

The coordinating board for higher education in cooperation with the board of governors shall develop a mission implementation plan for the campus at West Plains, Howell County, which is known as the "West Plains Campus of Missouri State University", and which shall be a teaching institution, offering one-year certificates, two-year associate degrees and credit and noncredit courses to both traditional and nontraditional students to meet the ongoing and emerging employer and educational needs of the citizens of the area served.

Missouri Western State University

Section 174.251. 1., RSMo.

On and after August 28, 2005, the institution formerly known as Missouri Western State College at St. Joseph, Buchanan County, shall hereafter be known as the "Missouri Western State University". Missouri Western State University is hereby designated and shall hereafter be operated as a statewide institution of applied learning. The Missouri Western State University is hereby designated an open enrollment institution which shall provide associate degree programs except as provided in subsection 2 of this section, baccalaureate degree programs, and graduate degree programs pursuant to subdivisions (1) and (2) of subsection 2 of section 173.005. The institution shall develop such academic support programs as it deems necessary and appropriate to an open enrollment institution with a statewide mission of applied learning. Consistent with the provisions of section 174.324, Missouri Western State University is authorized to offer master's level degree programs in accountancy, subject to the approval of the coordinating board for higher education as provided in subdivision (1) of subsection 2 of section 173.005.

Truman State University

Section 174.600., RSMo.

The Truman State University located in Kirksville, Adair County, is hereby designated and shall hereafter be operated as a statewide institution of liberal arts and sciences.

Appendix C – Missouri Comparative Data

State Support of Higher Education – U.S. Averages and Peer State Comparison				
	Appropriations per FTE Enrollment FY2011	Higher Education Support per \$1,000 personal income FY2010	Support of Higher Education per Capita FY2010	Tax Revenue Per Capita FY2010
MISSOURI (rank)	\$5,701 (27 th)	\$5.52 (42 nd)	\$204 (45 th)	\$3,210 (41 st)
U.S. average	\$6,290	\$7.08	\$282	\$4,133
U.S. high	\$15,943	\$14.64	\$605	\$9,104
U.S. low	\$2,599	\$2.52	\$110	\$2,835
Iowa	\$4,481	\$7.90	\$301	\$3,954
Louisiana	\$7,309	\$8.88	\$329	\$3,891
Maine	\$6,155	\$5.54	\$203	\$4,287
Nevada	\$7,357	\$5.82	\$215	\$3,834
Ohio	\$4,139	\$5.82	\$210	\$3,808
Oklahoma	\$7,613	\$8.92	\$316	\$3,319
Oregon	\$4,359	\$6.17	\$225	\$3,261
Tennessee	\$6,828	\$7.45	\$260	\$2,841
Texas	\$7,904	\$8.51	\$321	\$3,480
Wisconsin	\$6,243	\$7.82	\$299	\$4,266

Source: State Higher Education Finance, 2011, State Higher Education Executive Officers, www.sheeo.org.

State	Population	Population 18+	Per Capita Personal Income	# of Public Post- secondary Institutions ¹³	# of Independent (not for profit) Post- secondary Institutions	# of 18+ Residents per Public Institution
MISSOURI	5,988,927	4,563,491	\$36,406	34	58	134,220
Iowa	3,046,355	2,318,362	\$37,882	19	34	122,019
Louisiana	4,533,372	3,415,357	\$37,116	39	10	87,573
Maine	1,328,361	1,053,828	\$36,629	32	15	32,932
Nevada	2,700,551	2,035,543	\$35,777	7	3	290,792
Ohio	11,536,504	8,805,753	\$35,931	60	75	146,763
Oklahoma	3,751,351	2,821,685	\$35,535	29	14	97,299
Oregon	3,831,074	2,964,621	\$35,906	26	24	114,024
Tennessee	6,346,105	4,850,104	\$35,103	22	47	220,459
Texas	25,145,561	18,279,737	\$38,222	108	57	169,257
Wisconsin	5,686,986	4,347,494	\$38,010	31	29	140,242

Sources: U.S. Census 2010, www.census.gov; National Center for Education Statistics, State Education Data Profiles, <http://nces.ed.gov/programs/stateprofiles/>; U.S. Bureau of Economic Analysis, www.bea.gov.

¹³ The number represents individual campuses.

Appendix D – Peer Groups for Missouri Higher Education Institutions

Carnegie 2010 Basic Classification	Missouri Institutions	Sector Peers
Associate/Public – Rural Small	North Central Missouri College	161
Associate/Public – Rural Medium	Crowder College, Mineral Area College, Moberly Area College, State Fair Community College, Three Rivers Community College	
Associate/Public – Rural Large	Ozarks Technical Community College	
Associate/Public – Suburban Single Campus	St. Charles Community College	
Associate/Public – Suburban Multi Campus	East Central College	
Associate/Public – Urban Multi Campus	Metropolitan Community College, St. Louis Community College	
Associate/Public – Two-year college under four-year university	Missouri State University-West Plains	

Carnegie 2010 Basic Classification	Missouri Institutions	Sector Peers
Baccalaureate/Diverse Fields	Harris-Stowe State College, Missouri Southern State University, Missouri Western State University	11

Carnegie 2010 Basic Classification	Missouri Institutions	Sector Peers
Master's Colleges and Universities – Small Programs	Lincoln University	53
Master's Colleges and Universities – Medium Programs	Truman State University	
Master's Colleges and Universities – Large Programs	Missouri State University, Northwest Missouri State University, Southeast Missouri State University, University of Central Missouri	

Carnegie 2010 Basic Classification	Missouri Institutions	Sector Peers
Research University – Very High Research Activity	University of Missouri-Columbia	37
Research University – High Research Activity	Missouri University of Science and Technology, University of Missouri-Kansas City, University of Missouri-St. Louis	

To create the peer comparison groups, only those institutions in the specific subcategories of Missouri institutions were included.

Linn State Technical College peers (n=11) are public institutions two-year institutions offering primarily or exclusively technical programs.

Appendix E – Course Weighting Matrix

Weightings by Discipline and Level

	Lower Division	Upper Division	Master's/ Specialist	1 st Professional	Doctoral
Cluster 1	1.00	1.50	2.10	n/a	3.00
Cluster 2	1.51	2.26	3.17	n/a	4.53
Cluster 3	1.84	2.76	3.86	n/a	5.52
Cluster 4	2.19	3.28	4.60	5.48	6.57
Cluster 5	3.34	5.01	7.01	8.35	10.02
Cluster 6	n/a	n/a	n/a	10.02	n/a

Examples of Disciplines within Clusters

Cluster 1	Communication, foreign languages, English literature, family and consumer science, industrial arts, mathematics, statistics, parks/recreation/leisure, philosophy, religious studies, psychology, history
Cluster 2	Education, physical sciences, visual and performing arts, business
Cluster 3	Architecture, computer science, biological science, public administration
Cluster 4	Agriculture, library sciences, transportation and materials moving, health services
Cluster 5	Engineering, law
Cluster 6	Medicine, veterinary medicine, and dentistry

Appendix F – Performance Measures Developed by HEPF Taskforce (approved by CBHE April 2012)

Community Colleges

1. 3-year completion rate for first-time, full-time entering students.
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.
4. Percentage of career/technical graduates who pass their required licensure/certification examination.
5. Institution-specific measure of financial responsibility and efficiency.

Linn State Technical College

1. Graduation rate.
2. First-year retention.
3. Graduate 180-day placement rate.
4. Major field assessment passage rate.
5. Completions per full-time equivalent student.

Four-year Institutions

1. Freshman to sophomore retention or first-time, full-time freshmen successfully completing 24 credit hours in their first academic year.
2. Total degrees awarded or six-year cohort graduation rates
3. Improvements in assessments in general education, the major field, or professional/occupational licensure tests
4. Fiscal responsibility and efficiency through percent of total education and general expenditures expended on core mission or increase in educational revenue per FTE at or below the increase in CPI.
5. Institution specific-measure.

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