

REPORT OF THE TEXAS HIGHER EDUCATION COORDINATING BOARD ON

Higher Education Cost Efficiencies

TO THE GOVERNOR

November 1, 2010

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Texas Higher Education Coordinating Board

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INTRODUCTION

On September 9, 2009, Governor Rick Perry issued an Executive Order (RP73) directing that “the Texas Higher Education Coordinating Board (THECB), in cooperation with Texas public institutions of higher education, undertake a broad and comprehensive review of system-wide opportunities for cost efficiencies.”

It further directed that “based on the findings of this review, the THECB shall develop practices, policies, and recommendations for cost-containment among public institutions of higher education and submit these practices and policies to the governor, the legislature, and public institutions of higher education by November 1, 2010.”

To ensure that the broadest possible array of perspectives would be brought to bear on this assignment, the THECB named an Advisory Committee on Higher Education Cost Efficiencies (Advisory Committee). The Advisory Committee, chaired by Fred W. Heldenfels IV, was composed of two board members of the THECB and eighteen leaders from the state’s business community and all sectors of public higher education.

In carrying out its work, the Advisory Committee met seven times. At most of these meetings, committee members heard from state and national experts, individuals who shared best practices regarding key aspects of the Advisory Committee’s work. Following short presentations, committee members engaged these experts in extensive dialogue, probing more deeply and asking germane questions. Advisory Committee members then engaged in small group discussions at each meeting to compile and prioritize their recommendations for cost efficiencies. Most of these recommendations, including outcomes-based funding and changes to the TEXAS Grant Program, were put forth by the



Advisory Committee; this report represents some enhancements to those recommendations.

Detailed estimated savings and current state practices for most of the recommendations are provided in Appendix A of this report. Advisory Committee agendas, including a list of speakers, the Governor's Executive Order, and a roster of committee members are provided in Appendix B.

EXECUTIVE SUMMARY // Recommendations

FUNDING RESULTS – PAYING FOR PERFORMANCE

Short-term actions:

1. The Legislature should modify the current funding formulas for universities and community and technical colleges in ways that incentivize and reward results (measured by outcomes, e.g., degrees, student milestones) rather than enrollment measures only.

Estimated first-year savings = \$4.1 million

Estimated cost savings over 4 years = \$16.5 million

2. The Legislature should move the Performance Incentive Fund (PIF) into the university Instruction and Operations (I&O) formula using the THECB's recommended outcomes-based methodology for universities. The Legislature should also continue to fund programs designed to increase levels of externally generated research funds.

Estimated first-year savings = \$341,000

Estimated cost savings over 4 years = \$2.8 million

3. The Legislature should modify the TEXAS Grant Program to prioritize financially needy students who not only complete a rigorous high school curriculum but also achieve at relatively high academic levels.



4. The THECB should provide an analysis so that the Legislature may examine the efficacy of tuition and fee waiver/exemption programs for non-resident students.

Long-term actions:

1. The THECB should undertake an in-depth review of the state's higher education finance mechanisms and recommend changes necessary to align these policies with the state's goals of improved productivity and efficiency.
2. The THECB should conduct a cost/benefit analysis of an Early Commitment Financial Aid Program that provides low-income students in middle and early high school with a guarantee of financial aid for postsecondary education if they meet certain requirements.

CREATING CLEAR PATHWAYS FOR SUCCESSFUL STUDENT OUTCOMES

Short-term actions:

1. The Legislature should enact legislation to create statewide articulation agreements, not just for general education, but in those programs that collectively represent 80 percent of the transfer activity.

Estimated first-year savings = \$15.9 million

Estimated cost savings over 4 years = \$39.9 million

2. The Legislature should enact legislation to limit the length of associate's degree programs to no more than 60 semester credit hours.
3. The Legislature should require that a minimum of 10 percent of all semester credit hours generated on each campus be delivered through means other than conventional on-campus classroom activities such as lectures and seminars.

Estimated first-year savings = \$6.5 million

Estimated cost savings over 4 years = \$50.1 million

4. Institutions of higher education should improve credit hours produced per full-time equivalent faculty member by 10 percent.



Estimated first-year savings = \$102.1 million

Estimated cost savings over 4 years = \$255.3 million

5. The THECB should continue to increase collaboration with the Texas Education Agency (TEA), the State Board for Educator Certification, and public P-12 schools on such issues as improving teacher preparation and quality, promoting the College and Career Readiness Standards, and creating a college-going culture in every public school. Similarly, institutions of higher education should work more closely with local and regional P-12 school systems to improve teacher effectiveness and college readiness. In the long run, higher education can undertake no activity more cost efficient than working more collaboratively with public education to improve college readiness. Finally, two-year and four-year institutions of higher education must collaborate more closely on transfer issues (including two-plus-two programs), college and career readiness efforts, and facilities sharing.

Estimated first-year savings = \$7.8 million

Estimated cost savings over 4 years = \$19.5 million

6. Institutions of higher education should incentivize faculty to intervene more aggressively to assist their students in academic difficulty.
7. The Legislature should require students to file a degree plan after the completion of between 30-36 semester credit hours of coursework. Students should be required to meet with an advisor prior to enrolling in courses not included in their degree plans or before changing degree plans.
8. Institutions of higher education should implement competency-based advancement at both the undergraduate and graduate levels so that students can earn credit towards a credential at an accelerated pace based on work experience and the successful completion of rigorous and relevant assessments. Not all students require 15 weeks or a prescribed number of courses to master a defined body of knowledge.

Estimated first-year savings = \$45.9 million

Estimated cost savings over 4 years = \$459.3 million



Long-term action:

1. Institutions of higher education should identify and adopt tools for measuring learning outcomes. Institutions should be able to demonstrate that their graduates have achieved mastery of disciplinary knowledge and basic intellectual skills such as critical thinking, effective communication, and the ability to synthesize substantial amounts of information and data.

MEETING DEMAND WITH NEW APPROACHES TO DELIVERY

Short-term action:

1. The THECB should exercise its authority to ensure the development of a statewide, user-friendly online delivery system for developmental education and associate degree programs that draw on the best online courses already available, organized under the degree-granting authority of a single public or private entity.

Estimated first-year savings = \$3 million

Estimated cost savings over 4 years = \$30.1 million

Long-term action:

1. The THECB should develop a *strategic growth plan* for meeting student demand and identifying a wide variety of cost-effective delivery models.

Estimated first-year savings = \$14.1 million

Estimated cost savings over 4 years = \$141.5 million

E-textbooks

Short-term action:

1. Institutions of higher education should participate in a pilot study to evaluate the efficacy of e-textbooks in regard to their affordability to both students and institutions, and their impact on student learning.

Long-term action:

1. Institutions of higher education should create effective digital learning environments for students.



MAKING CAPITAL FINANCING MAKE SENSE

Long-term action:

1. Either by legislative action or Governor's Executive Order, the THECB should be directed to develop a recommended approach to capital financing with special attention given to developing an alternative to the use of Tuition Revenue Bonds.

Estimated first-year savings = \$11.5 million

Estimated cost savings over 4 years = \$145.3 million

MAKING PRODUCTIVITY AND CONTINUOUS IMPROVEMENT A CULTURAL CHANGE

Short-term actions:

1. The Legislature should mandate that each institution increase the cost efficiency with which it produces graduates by 10 percent.

Estimated first-year savings = \$98.2 million

Estimated cost savings over 4 years = \$1.96 billion

2. The THECB should create a Statewide Higher Education Continuous Improvement Council (CIC) within the THECB as a mechanism for promoting and institutionalizing efficiencies at all levels – campus, system, and state.
3. Institutions of higher education should adopt and expand established best practices in cost efficiencies already in place at other institutions in Texas.

- a. Degree and certificate efficiencies

- i. The THECB should require institutions of higher education to close down low-producing degree programs.

Estimated first-year savings = \$29.3 million

Estimated cost savings over 4 years = \$73.2 million

- ii. Institutions of higher education should engage in more multi-institutional arrangements for delivering courses, especially those in small majors.



Estimated first-year savings = \$100,000

Estimated cost savings over 4 years = \$1.6 million

- iii. Institutions of higher education should develop class schedules that utilize more hours of the day and days of the week. Increased use of existing facilities should be accomplished before new facilities are approved.

Estimated first-year savings = \$31.6 million

Estimated cost savings over 4 years = \$221.5 million

- iv. Institutions of higher education should more clearly state the expectation that full-time students' course workload is 30 semester credit hours per calendar year.

Estimated first-year savings = \$31.6 million

Estimated cost savings over 4 years = \$221.5 million

- v. Institutions of higher education should adopt a computer-based assessment system for developmental education.

Estimated first-year savings = \$3.9 million

Estimated cost savings over 4 years = \$19.5 million

b. Administrative efficiencies

- i. Institutions of higher education should streamline administrative processes across institutions and set standards for the number of appointed administrative positions and salary levels that are consistent with best practices, such as those noted in Bain & Company's diagnostic report, *Achieving Operational Excellence at the University of California, Berkeley*.

Estimated first-year savings = \$83.4 million

Estimated cost savings over 4 years = \$753.1 million

- ii. Institutions of higher education should expand even further the size of procurement pools in such areas as energy, software licenses, and insurance (both health and property) by creating statewide pools among community colleges and/or universities, similar to those already developed by The University of Texas and Texas A&M University Systems.

Estimated first-year savings = \$5.8 million

Estimated cost savings over 4 years = \$25.1 million



- iii. Institutions of higher education should consolidate and out-source services such as e-mail and other information technology when cost efficient.

Estimated first-year savings = \$7 million

Estimated cost savings over 4 years = \$34.3 million

- iv. The THECB should review the current statewide data system and identify additional information required for decision making and policy analysis in order to create the nation's most user-friendly higher education statewide data warehouse.
- v. The THECB should work with other entities to expand TexShare, the current online library system, to include additional materials as identified by institutions of higher education.

Estimated first-year savings = \$2.6 million

Estimated cost savings over 4 years = \$26.2 million



Early in the deliberations of the Advisory Committee on Higher Education Cost Efficiencies, it became clear that the focus could not be efficiency defined narrowly or merely doing business as usual, only more cheaply.

Rather, the Advisory Committee determined that the focus had to be on *productivity* – achieving better results in the most cost-efficient manner. It was also determined that efficiency could not be defined solely in terms of state funding. Costs to students had to be considered as well; the objective was not to reduce needed levels of state funding by shifting costs to students but to achieve higher performance and better outcomes in the use of funds from all sources.

In 2000, Texas launched its ambitious strategic plan for higher education, *Closing the Gaps by 2015*. The plan focuses on bringing Texas to parity among the 10 most populous states in four critical areas of higher education: participation, success, excellence, and research. This plan is one of the first of its kind and has been widely embraced by education, business, political, and community stakeholders across the state. Texas has already been successful at meeting a number of interim targets and has made substantial progress in attaining the ultimate goals of the plan. However, while achieving the goals of *Closing the Gaps* is the essential next step for Texas to drive economic development and improve quality of life, it will not be enough.

While the goals established in *Closing the Gaps* were intended to simply bring Texas to parity with its peer states, the U.S. itself has been falling behind other countries in educational attainment. To position Texas as a global leader in higher education, both in terms of educational levels of its population and excellence, the state must benchmark itself against the best in the world and seek to match that level of performance. In terms of this international arena, this means increasing the number of post-secondary awards (bachelor's degrees,



associate's degrees, and certificates¹) beyond what is called for in *Closing the Gaps*. While *Closing the Gaps* has set the stage and has resulted in momentum and achievement, Texas' subsequent long-term strategic plan will require a longer timeline and a globally competitive set of targets. Failure to succeed in meeting higher expectations will relegate Texas and its citizens to a future far less prosperous than the circumstances Texans currently enjoy.

Given the magnitude of these goals and the current economic conditions, it is highly unlikely that institutions of higher education will receive enough state funding to allow them to continue business as usual. Therefore, institutions of higher education must use their current and future resources much more efficiently and effectively. And as the Advisory Committee determined, public institutions of higher education must not only become more cost efficient, they must align their activities more closely with state goals and needs.

THE BIG IDEAS

The Advisory Committee's ideas fell naturally into five overarching "big ideas." These five categories are:

- ◆ Funding Results – Paying for Performance.
- ◆ Creating Clear Pathways for Successful Student Outcomes.
- ◆ Meeting Demand with New Approaches to Delivery.
- ◆ Making Capital Financing Make Sense – For Both New Buildings and Deferred Maintenance.
- ◆ Making Productivity and Continuous Improvement a Cultural Change.

Institutions and college and university systems should be commended for the wide variety of efficiency improvement activities already underway. Many of the ideas presented during the Advisory Committee's deliberations are already being implemented somewhere in the state's public higher education system. The missing link is a policy environment that actively promotes best practices and that

¹ Certificate programs are workforce programs designed for entry-level employment or for upgrading skills and knowledge within an occupation. Certificate programs can also serve as building blocks for Associate of Applied Science (AAS) degree programs.



can be implemented on the *scale* necessary to achieve maximum efficiency. The solutions necessary to achieve these ideas require action by both the state and institutions of higher education.

In most of the sections that follow is a description of the optimum conditions for cost efficiencies. This is followed by a summary of recommended short-term and long-term actions with corresponding estimates of impacts. See Appendix A for a more complete description of impact estimates as well as descriptions of practices in other states that provide concrete examples of each recommendation.

FUNDING RESULTS // Paying for Performance

The incentives embedded in the funding formulas for institutions of higher education are the most powerful tools available to policymakers seeking to enhance productivity.

This is true whether the policymaker is focused on all state colleges and universities, on systems of institutions, or on individual campuses. The desired state of affairs is one in which:

- ◆ The three major components of budget actions that affect operating budgets – appropriations to institutions, tuition, and students – are treated as a systemic whole.
- ◆ The incentives related to each component are designed to promote both goal achievement and efficiency. For those elements focused on institutions, this means producing results (degree completions, research competitiveness, etc.) in a cost-effective manner. Similarly for students, both tuition and student financial aid policies should encourage preparation and rapid progress toward completion of a program of study while minimizing unnecessary demands on the system (dropping courses, etc.) in the process.
- ◆ The funding mechanisms appropriately reflect not only the mission of different types of institutions but a common focus on state priorities.



RECOMMENDATIONS

Short-term actions:

1. The Legislature should modify the current funding formulas for universities and community and technical colleges in ways that incentivize and reward results (measured by outcomes, e.g., degrees, student milestones) rather than enrollment measures only.
 - a. Allocate 10 percent of state formula funding to universities on the basis of student outcomes (e.g., undergraduate degrees awarded, undergraduate degrees awarded to at-risk students, undergraduate degrees awarded to students in STEM fields, and graduating more students than predicted).
 - b. Allocate 10 percent of state formula funding to community and technical colleges on the basis of student outcomes – in this case, completion of certificates and degrees, and completion of intermediate milestones such as developmental education, the first college-level math and English courses, 15 and 30 semester credit hours, and transfer to a four-year institution.

Approximately 14 states currently have or are planning to have a performance-based funding system for higher education. For example, a recent report by the Institute for Higher Education Leadership and Policy at California State University Sacramento notes that California's community colleges are failing to properly educate the state's future workforce and recommends a new state funding model that rewards community colleges when students complete degrees and transfer.

Estimated first-year savings based on FY2009 costs and enrollments =

\$4.1 million

Estimated cost savings over 4 years =

\$16.5 million



2. The Legislature should move the Performance Incentive Fund (PIF) into the university Instruction and Operations (I&O) formula using the THECB's recommended outcomes-based methodology for universities. The Legislature should also continue to fund programs designed to increase levels of externally generated research funds, such as the Texas Research Incentive Program, National Research University Fund, Competitive Knowledge Fund. etc.

Estimated first-year savings based on FY2009 costs and enrollments =

\$341,000

Estimated cost savings over 4 years =

\$2.8 million

3. The Legislature should modify the TEXAS Grant Program to prioritize financially needy students who not only complete a rigorous high school curriculum but also achieve at relatively high academic levels. Priority students would have to meet any two of four proposed academic criteria to be first in line to receive a TEXAS grant. Once priority students are served, other students who complete the Recommended High School Curriculum and have financial need would be awarded a TEXAS Grant. A review of data conducted by the THECB indicates that TEXAS grant recipients who meet two of the four proposed academic criteria graduate at twice the rates of those who do not.
4. The THECB should provide an analysis so that the Legislature may examine the efficacy of tuition and fee waiver/exemption programs for non-resident students.

Short-term action recommendations three and four will not necessarily reduce overall spending but will lead to greater efficiency and productivity. Texas must realize a bigger return on its investment in higher education by producing more degrees and certificates per tax and tuition dollar invested.



Long-term actions:

1. The THECB should undertake an in-depth review of the state's higher education finance mechanisms and recommend changes necessary to align these policies with the state's goals of improved productivity and efficiency. The review should consider tuition and student aid policies as well as the mechanisms by which state funds are allocated to institutions. It should also consider allocation of some funds to systems to provide them leverage to promote needed changes within their constituent institutions. However, changing allocation of the funding formulas to be partly outcomes-based is a step that should be taken immediately; this should not wait on the longer-term review.
2. The THECB should conduct a cost/benefit analysis of an Early Commitment Financial Aid Program that provides low-income students in middle and early high school with a guarantee of financial aid for postsecondary education if they meet certain requirements, including successful completion of a rigorous college-prep curriculum.

CREATING CLEAR PATHWAYS FOR SUCCESSFUL STUDENT OUTCOMES

For the Texas system of higher education to function most productively, there must be a clear and efficient pathway by which students can get from whatever their starting point to successful completion of a program of study.

An efficient system is characterized by:

- ◆ A clear statement of and commitment to College and Career Readiness Standards.
- ◆ A statewide developmental education program that is tailored to address specific deficiencies and remove those deficiencies within one year or less.



- ▶ A program of study designed to be completed within four years for a baccalaureate degree and two years for an associate’s degree. With few exceptions, baccalaureate degree programs are no more than 120 semester credit hours in length (in accordance with Texas Education Code, Section 61.0515), and associate’s degree programs are no more than 60 semester credit hours in length.
- ▶ Access by all Texas students to opportunities for acceleration through advanced placement, dual credit, competency-based evaluations, and other test-out options. Incentives should be developed to encourage both students and institutions to participate in these opportunities (a feature that needs to be incorporated into any rethinking of a funding model).
- ▶ An efficient transfer system that maximizes students’ mobility within the Texas public higher education system while encouraging institutional distinctiveness.
- ▶ Access to courses when needed. Students are not prevented from completing programs by an inability to gain access to needed courses.
- ▶ Programs, courses, and institutional policies designed with both student success and efficiency of delivery in mind. Features would include:
 - Programs with fewer options with respect to specific requirements. Fewer options can lead to less student confusion, timelier progress to degrees, and greater coherence of student knowledge.
 - Policies that limit “rework” – dropping courses, taking them multiple times.
 - Courses designed for effective and efficient delivery; for example, using the principles devised by the National Center for Academic Transformation² – principles that have proven to yield better learning outcomes and, typically, 30-35 percent cost savings.

Many of the actions necessary to ensure that students have efficient pathways to credentials are already in place around the state, but a comprehensive, state-wide commitment to the principles and practices indicated above is needed.

RECOMMENDATIONS

Short-term actions:

1. The Legislature should enact legislation to create statewide articulation agreements, not just for general education, but in those programs that collectively represent 80 percent of the transfer activity.

² <http://www.thencat.org/>



Estimated first-year savings based on FY2009 costs and enrollments =

\$15.9 million

Estimated cost savings over 4 years =

\$39.9 million

2. The Legislature should enact legislation to limit the length of associate's degree programs to no more than 60 semester credit hours in length.
3. The Legislature should require that a minimum of 10 percent of all semester credit hours generated at each institution of higher education be delivered through means other than conventional on-campus classroom activities such as lectures and seminars: for example, dual credit, competency-based course credit, credit-bearing internships, and online courses. This recommendation is made both to promote more efficient uses of existing campus resources and to ensure that students develop the learning skills that they will need to be successful in the future.

Estimated initial³ year savings based on FY2009 costs and enrollments =

\$6.5 million

Estimated cost savings over 4 years =

\$50.1 million

4. Institutions of higher education should improve credit hours produced per full-time equivalent faculty member by 10 percent. This recommendation reflects the strong belief of the Advisory Committee that targets and benchmarks be established at the state level by the THECB, but that the means by which these goals are achieved must be left to decision makers at the campus and system level.

³ For those estimates that are based upon reduced future costs due to decreased space needs, the savings will be realized as a result of currently planned buildings that would either not be built or at least delayed.



Estimated first-year savings based on FY2009 costs and enrollments =

\$102 million

Estimated cost savings over 4 years =

\$255.3 million

5. The THECB should continue to increase collaboration with the Texas Education Agency (TEA), the State Board for Educator Certification, and public P-12 schools on such issues as improving teacher preparation and quality, promoting the College and Career Readiness Standards, and creating a college-going culture in every public school. Similarly, institutions of higher education should work more closely with local and regional P-12 school systems to improve teacher effectiveness and college readiness. In the long run, higher education can undertake no activity more cost efficient than working more collaboratively with public education to improve college readiness. Finally, two-year and four-year institutions of higher education must collaborate more closely on transfer issues (including two-plus-two programs), college and career readiness efforts, and facilities sharing.

Estimated first-year savings based on FY2009 costs and enrollments =

\$7.8 million

Estimated cost savings over 4 years =

\$19.5 million

6. Institutions of higher education should incentivize faculty to intervene more aggressively to assist their students in academic difficulty. Aggressive interventions might include mandatory student/faculty consultations and either mandatory tutoring or participation in study groups. National surveys of student attitudes indicate that students often fail or drop out of higher



education because they feel alienated from faculty and unconnected to the intellectual life of their institutions, particularly large public institutions.

7. The Legislature should require students to file a degree plan after the completion of between 30-36 semester credit hours of coursework. Students should be required to meet with an advisor prior to enrolling in courses not included in their degree plans or before changing degree plans.
8. Institutions of higher education should implement competency-based advancement at both the undergraduate and graduate levels so that students can earn credit towards a credential at an accelerated pace based on work experience and the successful completion of rigorous and relevant assessments. Not all students require 15 weeks or a prescribed number of courses to master a defined body of knowledge.

Estimated first-year savings based on FY2009 costs and enrollments =

\$45.9 million

Estimated cost savings over 4 years =

\$459.3 billion

Long-term action:

1. Institutions of higher education should identify and adopt tools for measuring learning outcomes. Institutions should be able to demonstrate that their graduates have achieved mastery of disciplinary knowledge and basic intellectual skills such as critical thinking, effective communication, and the ability to synthesize substantial amounts of information and data.



MEETING DEMAND WITH NEW APPROACHES TO DELIVERY

Meeting the state’s education goals and responding to the state’s growing college-age population will require that institutions have the capacity to enroll many more students than they are currently prepared to serve.

If this growth is planned for and accommodated strategically, the result can be a much more efficient system of higher education. Without a *plan for strategic growth* of higher education, Texas will move toward a situation in which the enrollments required to meet goals will simply be unaffordable.

RECOMMENDATIONS

Short-term action:

1. The THECB should exercise its authority to ensure the development of a statewide, user-friendly online delivery system for developmental education and associate degree programs that draw on the best online courses already available, organized under the degree granting authority of a single public or private entity. This online entity will:
 - o Ensure students have the skills needed for successful academic work.
 - o Meet the transfer requirements for both general education and work in the most popular majors.
 - o Implement a “limited course options” (i.e., targeted) approach to meeting transfer requirements.
 - o Implement course design statewide that reflects the best thinking about effective and efficient pedagogy.
 - o Plan for upper-division, university-based courses to be added subsequently.



This recommended delivery system is a short-term priority for several reasons. First, it addresses promptly the lower-division curriculum common across the programmatic interests of additional students. Second, it can be delivered anywhere in the state and is therefore immune to the consequences of over- or under-realization of estimated demand in different parts of the state. Finally, it could be a major step for delivering the type of highly structured programs that have proven to be successful in moving (especially adult and at-risk) students to successful completion of programs.

Estimated first-year savings based on FY2009 costs and enrollments =

\$3 million

Estimated cost savings over 4 years =

\$30.1 million

Long-term action:

1. The THECB should develop a strategic growth plan for meeting student demand and identifying a wide variety of cost-effective delivery models.

The plan should consider the following options:

- o Increasing productivity and capacity of existing institutions.
- o Targeting community colleges as producers of higher education credentials and as partners with the universities to increase success in lower- division course completion and reduce costs.
- o Creating new types of institutions, such as online only institutions (as recommended above based on the University of Maryland University College model), competency-based institutions similar to the new Western Governor's University of Indiana, and no-frills instructional institutions (institutions with few student life amenities and a very structured curriculum).

Estimated first-year savings based on FY2009 costs and enrollments = \$14.1 million; Estimated cost savings over 4 years = \$141.5 million

- o Entering into performance contracts with private (including for-profit) educational providers.



The increasing cost of postsecondary textbooks has raised considerable concern among advocates of affordability in higher education.

In addition to the Governor’s Executive Order to examine the cost of instructional materials, HB 4149 (81st Texas Legislature) directed the THECB to conduct a study and make recommendations regarding electronic textbooks (digital versions of textbooks that can either be accessed online or downloaded to a personal computer or an e-reader). The legislation also required the THECB to gather input from student members of the boards of regents. For more background and analysis of these recommendations, see Appendix A.

RECOMMENDATIONS

Short-term action:

1. Institutions of higher education should participate in a pilot study to evaluate the efficacy of e-textbooks in regard to their affordability to both students and institutions and their impact on student learning.

Long-term action:

1. Since textbook sales generate revenue for universities, the switch to e-textbooks could result in a loss of revenue, a challenge in the current budget environment. However, this issue should not overrule considerations that benefit students. Therefore, by 2013, public institutions of higher education should create effective digital learning environments for students that incorporate three critical technologies: mobile computing (e.g., smart phones, netbooks, laptops, and a wide range of other devices that access the Internet using cellular-based portable hotspots and mobile broadband cards); open content (e.g., course materials that are made

available online by a college or university to both students and the general public for free); and e-textbooks.

MAKING CAPITAL FINANCING MAKE SENSE

An approach to capital financing that assures the greatest benefits at the least cost to the state would:

- Implement a strategic growth plan. Capital investments would be prioritized according to need as determined by space utilization that is efficient, based on benchmarks, and by the THECB's determination that new facilities are necessary to meet demands.
- Require institutions to spend 2 percent (\pm) of the replacement value of physical plants⁴ on renewal and renovation projects each year. This would not remove the deferred maintenance backlog, but it would stop the already large backlog from getting larger.
- Replace Tuition Revenue Bonds (TRBs) with instruments that would be both more flexible and more policy-driven. Flexibility can be achieved by giving institutions more leeway in entering into public/private partnerships – assuming repayment obligations within broad policy established by the THECB. Policy prioritization could be accomplished through general obligation bonds issued in accordance with applicable state statutes and THECB rules.

RECOMMENDATION

Implementation of many of the ideas discussed by the Advisory Committee regarding a more cost-effective approach to capital financing will take considerable further refinement and discussion with the legislature.

Long-term action:

1. Either by legislative action or Governor's Executive Order, the THECB should be directed to develop a recommended approach to capital financing with special attention given to developing an alternative to the

⁴ Replacement Value – The value of an institution's overall campus facilities, as determined annually by the Board. The method of calculation is based upon recently approved Board project costs, with adjustments based upon room types and the institution's location within the state. Replacement values for public universities, the Lamar State Colleges, and the Texas State Technical Colleges are calculated only for E&G space. Replacement values for public health-related institutions are calculated for the NASF space. Replacement values are used to measure the validity of construction projects that are submitted to the Board for approval and are not recommended for insurance purposes.



use of Tuition Revenue Bonds. Once developed, this approach should be established in legislation to ensure that capital funds are used in the most efficient and effective ways.

Estimated first-year savings based on FY2009 costs and enrollments =

\$11.5 million

Estimated cost savings over 4 years =

\$145.3 million

MAKING PRODUCTIVITY AND CONTINUOUS IMPROVEMENT A CULTURAL CHANGE

The recommendations presented in the previous sections set the stage for fundamental changes in the way public higher education in Texas performs its core educational mission. They also call for fundamental changes in the relationships between higher education and state government. In short, they call for changes to “business-as-usual.” These ideas covered both curricular and administrative functions within campuses and systems. Most can be accomplished without action by the legislature, although in a few cases legislative “encouragement” might be an asset.

RECOMMENDATIONS

Short-term actions:

1. The Legislature should mandate that each institution of higher education increase the cost efficiency with which it produces graduates by 10 percent (i.e., mandate that each institution decrease the total costs per degree granted by 10 percent). Within this broad mandate, institutions should be free to determine the means to this end most consistent with their circumstances.



Estimated first-year savings based on FY2009 costs and enrollments =

\$98.2 million

Estimated cost savings over 4 years =

\$1.9 billion

2. The THECB should create a Statewide Higher Education Continuous Improvement Council (CIC) within the THECB as a mechanism for promoting and institutionalizing efficiencies at all levels – campus, system, and state. The THECB should provide administrative and logistical support to the statewide CIC. Similar to Ohio’s Efficiency Council, it would be a forum for identifying and replicating best practices. It should also broker collaborative efforts across campuses/systems as appropriate. As a second task, the Council should compile a list of specific areas in which state mandates, policies, or procedures create inefficiencies or excessive costs for institutions. The purpose of this “policy audit” activity is to build a case for regulatory reform that can lead to improvements in effectiveness and efficiency. As a final task, the Council, working with campus and system representatives, should develop a list of measures for collecting data regarding savings generated from efficiency initiatives, set targets for continuous improvement, and report on savings annually to the governor, the legislature, and the public. In short, the mission of the CIC would be to change Texas higher education operations by creating a LEAN culture (i.e., increasing productivity with available resources) across all higher education activities.
3. Institutions of higher education should adopt and expand established best practices in cost efficiencies already in place at other institutions in Texas. Many of the necessary efficiencies can be achieved by expanding practices already being implemented at some level. These include the following:
 - a. Degree and certificate efficiencies



- i. The THECB should require institutions of higher education to close down low-producing degree programs according to established guidelines and procedures.

Estimated first-year savings based on FY2009 costs and enrollments =

\$29.3 million

Estimated cost savings over 4 years =

\$73.2 million

- ii. Institutions of higher education should engage in more multi-institutional arrangements for delivering courses, especially those in small majors.

Estimated first-year savings based on FY2009 costs and enrollments =

\$100,000

Estimated cost savings over 4 years =

\$1.6 million

- iii. Institutions of higher education should develop class schedules that utilize more hours of the day and days of the week. Increased use of existing facilities should be accomplished before new facilities are approved.

Estimated initial⁵ first-year savings based on FY2009 costs and enrollments =

\$31.6 million

Estimated cost savings over 4 years =

\$221.5 million

⁵ For those estimates that are based upon reduced future costs due to decreased space needs, the savings will be realized as a result of currently planned buildings that would either not be built or at least delayed.



- iv. Institutions of higher education should more clearly state the expectation that full-time students' course workload is 30 semester credit hours per calendar year.

Estimated initial⁶ first-year savings based on FY2009 costs and enrollments =

\$31.6 million

Estimated cost savings over 4 years =

\$221.5 million

- v. Institutions of higher education should adopt a computer-based assessment system for developmental education.

Estimated first-year savings based on FY2009 costs and enrollments =

\$3.9 million

Estimated cost savings over 4 years =

\$19.5 million

b. Administrative efficiencies

- i. Institutions of higher education should streamline administrative processes across institutions and set standards for the number of appointed administrative positions and salary levels that are consistent with best practices, such as those noted by Bain & Company's diagnostic report, *Achieving Operational Excellence at the University of California, Berkeley*.

Estimated first-year savings based on FY2009 costs and enrollments =

\$83.5 million

(not including a required first-year investment)

⁶ Ibid.



Estimated cost savings over 4 years =

\$753.1 million

- ii. Institutions of higher education should expand even further the size of procurement pools in such areas as energy, software licenses, and insurance (both health and property) by creating statewide pools among community colleges and/or universities, similar to those already developed by The University of Texas and Texas A&M University Systems.

Estimated first-year savings based on FY2009 costs and enrollments =

\$5.8 million

Estimated cost savings over 4 years =

\$25.1 million

- iii. Institutions of higher education should consolidate and out-source services such as e-mail and other information technology when cost efficient.

Estimated first-year savings based on FY2009 costs and enrollments =

\$7 million

Estimated cost savings over 4 years =

\$34.3 million

- iv. The THECB should review the current statewide data system and identify additional information required for decision making and policy analysis in order to create the nation's most user-friendly higher education statewide data warehouse.
- v. The THECB should work with other entities to expand TexShare, the current online library system, to include additional materials as identified by institutions of higher education.



Estimated first-year savings based on FY2009 costs and enrollments =

\$2.6 million

Estimated cost savings over 4 years =

\$26.2 million

CONCLUSION

Most of the recommendations made in this report ultimately will have to be implemented at the campus level. That is where courses are taught, students are served, and administrative decisions are made. But campus-level leaders need a statewide policy environment that provides incentives for necessary changes. Further, some changes can only be made at the state level: for example, no campus or system can unilaterally make the kinds of decisions required to implement the recommendation made in the section entitled “Meeting Demand with New Approaches to Delivery.” The THECB and the Advisory Committee on Higher Education Cost Efficiencies believe that the greatest productivity gains will be realized by actions taken jointly and cooperatively at the state and campus level.



APPENDIX A

Cost Savings Methodologies and Current State Practices

REPORT OF THE TEXAS HIGHER EDUCATION COORDINATING BOARD
TO THE GOVERNOR ON HIGHER EDUCATION COST EFFICIENCIES

Produced in collaboration with the Higher Education Policy Institute (HEPI). HEPI is funded through a multi-year grant from Houston Endowment Inc. and produces comprehensive and objective analyses to inform Texas higher education policy and practice in support of *Closing the Gaps by 2015*.



Texas Higher Education Coordinating Board

INTRODUCTION

This document contains the estimated impacts of the recommendations of the Texas Higher Education Coordinating Board on Higher Education Cost Efficiencies and descriptions of current practices in other states that are representative of each recommendation. The estimates provide a reasonable expectation of impacts within an order of magnitude of each recommendation. The descriptions of current state practices provide policymakers and institutions of higher education with concrete illustrations as they consider each recommendation. Where available, cost savings of practices in other states are provided.

The structure of this appendix mirrors that of the report. The estimated savings for each estimable recommendation are provided along with a brief rationale, including assumptions and methodology, followed by current state practices.

The estimates are annual and based upon FY2009 costs and enrollments unless otherwise indicated. In addition, estimates are provided for the *Closing the Gaps by 2015* enrollment target of 1.6 million students, a 17.2 percent increase over the FY2009 statewide enrollment of approximately 1.36 million students. The credibility of future impact estimates should, as always, be considered with a reasonable degree of caution. Nevertheless, they effectively illustrate that as enrollments grow, the current condition and practices of the public higher education system will only continue to cost the state, parents, and students more and more. It is important to note that the estimated savings for the *Closing the Gaps* enrollment figures are conservative because they assume that the costs of higher education in the year that enrollments reach the *Closing the Gaps* targets are the same as FY2009 costs, an optimistic assumption given historical trends.

One recommendation addresses the process by which capital financing is reviewed and approved. An estimate of reduced future expenditures related to debt financing is provided for this recommendation. Other recommendations involve reduced future space needs. In these cases, the estimates are conservative in that they are based upon avoided future costs associated with



plant operations and maintenance, and do not include reduced capital outlays for future buildings.

Depending upon the recommendation, the estimated impacts are in terms of savings, reduced future costs, or increased productivity and apply to the overall cost of higher education, to costs directly paid by the state, or to costs paid by students and their parents. Many of the recommendations are clearly related to one another. For the purposes of the cost estimates, however, it is assumed that each recommendation is independent and not contingent upon any of the other recommendations.

The report contains both short-term and long-term recommendations. Since the long-term recommendations tend not to lend themselves to estimable impacts, the estimates contained in this document correspond primarily to the short-term recommendations.



RECOMMENDATIONS

Short-term actions:

1. The Legislature should modify the current funding formulas for universities and community and technical colleges in ways that incentivize and reward results (measured by outcomes, e.g., degrees, student milestones) rather than enrollment measures only.
2. The Legislature should move the Performance Incentive Fund (PIF) into the university Instruction and Operations (I&O) formula using the THECB's recommended outcomes-based methodology for universities. The Legislature should also continue to fund programs designed to increase levels of externally generated research funds.
3. The Legislature should modify the TEXAS Grant Program to prioritize financially needy students who not only complete a rigorous high school curriculum but also achieve at relatively high academic levels.
4. The THECB should provide an analysis of tuition and fee waiver/exemption programs for non-resident students so that the Legislature may examine their efficacy.

Long-term actions:

1. The THECB should undertake an in-depth review of the state's higher education finance mechanisms and recommend changes necessary to align these policies with the state's goals of improved productivity and efficiency.

The THECB should conduct a cost/benefit analysis of an Early Commitment Financial Aid Program that provides low-income students in middle and early high school with a guarantee of financial aid for postsecondary education if they meet certain requirements.

ESTIMATED SAVINGS AND CURRENT STATE PRACTICES

Short-term Action 1: Modify the Formulas – Estimated Savings

Estimated savings are based upon the reduction in the costs associated with students who do not complete coursework and subsequently re-enroll in the same courses. The estimated formula funding costs of dropped courses, assuming all students re-enroll in the same course at four-year institutions, are \$62.3 million in FY2009. The corresponding costs for two-year institutions are \$102.7 million. The actual re-enrollment rate of students is not known. The table below, therefore, includes the annual savings of funds appropriated through the funding formula, assuming that institutions statewide decrease the percentage of dropped semester credit hours (SCHs) by 5 percent of the FY2009 level each year and assuming a re-enrollment rate of 50. After four years, the total estimated savings based upon the FY2009 enrollment levels is \$16.5 million, and \$19.3 million based upon *Closing the Gaps* (CTG) enrollment in FY2015.

YEAR	PERCENT DECREASE IN DROPPED SCHs	ANNUAL SAVINGS (FY2009)	ANNUAL SAVINGS (CTG)
01	5%	\$4,126,589	\$4,837,343
02	5%	\$4,126,589	\$4,837,343
03	5%	\$4,126,589	\$4,837,343
04	5%	\$4,126,589	\$4,837,343
TOTAL		\$16,506,356	\$19,349,372

Short-term Action 1: Modify the Formulas – Current State Practices

Research shows that 14 states currently have or are planning to adopt a performance-based funding system for higher education. **Ohio** transitioned as of FY2010 its state allocations from a primarily enrollment-based formula that applied to all types of institutions to an outcomes-based formula that differs by type of institution. For the university main campuses, 95 percent of the state allocations are based on course completion in FY2010 and 5 percent are based on degree completions. The percentage of allocations based upon degree completions will increase by 5 percent per year to a maximum of 25 percent.⁷

⁷ Personal communication. October 2, 2010.



Allocations to university regional campuses will be based in the short-term on course completions, with the possible addition of degree completions in two to four years. In both cases, **Ohio** is accounting for differences in the student bodies across campuses, with weighted funding for at-risk students defined as those eligible for state-based financial aid. The additional funding is designed for retention programs and policies for at-risk students who are less likely to complete a degree.

The **Ohio** approach builds upon a previous performance plan that awarded funds based upon the number of graduates starting in 1998. From FY1998 to FY2003, the median time to bachelor's degree decreased from 4.7 years to 4.3 years.⁸

Momentum Points are measureable educational achievements that include both intermediate outcomes such as taking a college-level course or persistence past the first year, as well as terminal outcomes such as credential attainment. **Washington State** allocates funding to community colleges based upon the proportion of students who achieve various Momentum Points.

Ohio will begin allocating a portion of funding to community colleges in FY2011 on the basis of Momentum Points based largely upon the Washington model. The proportion of the community college funding based upon Momentum Points will be 5 percent initially and will reach a maximum of 20 percent within the next five years. Although not set in stone, the candidates for consideration are enrolling in community college while in high school, passing remedial work, passing a college-level math course, achieving 15, 30, and 45 semester credit hours, and credential attainment. In addition, Ohio is considering the number of transfers to a university.

In 1997, **Florida** provided 5 percent of appropriations to community colleges on the basis of time-to-degree, completions, job placement, and transfer. While enrollments at Florida's community colleges increased 18 percent from 1996 to 2007, the number of degrees increased 43 percent.⁹

Indiana has kept their enrollment-based funding and added in the FY2007-09 biennium approximately \$5,000 per bachelor's degree and \$3,500 per associate's degree awarded over the previous year's level, \$5,000 per degree completed ontime, and an additional \$5,000 per degree awarded to a Pell Grant recipient over the previous year's level. Additionally, Indiana awards additional funds to community colleges for each student full-time-equivalent that transfers to a university. In the upcoming biennium, Indiana will also provide additional funds to universities that enroll transfers on the same basis.

The **University of Minnesota System** has adopted a unique approach of a base plus performance salary structure for the chancellor of the system, who is eligible for an

⁸ See the Higher Education Performance Funding 2.0 - Funding Degrees at <http://www.collegeproductivity.org/sites/default/files/resources/TipsheetonPerformanceFunding.pdf>.

⁹ Ibid.



additional \$3,000-\$15,000 depending upon performance. The chancellor, in turn, has restructured the pay of each member president accordingly. Each institution is required to include in its performance targets a minimum of 25 percent of coursework conducted online, the number and success rates of under-represented students, increases in the number of STEM enrollments and degrees, and increases in the number of STEM K12 certified teachers.

Short-term Action 2: Performance Incentive Fund – Estimated Savings

Since the Performance Incentive Fund was established in 2007, the course-completion rates at four-year institutions have improved from 92.9 percent in 2007 to 95.1 percent in 2009. The projected savings estimate is based upon the assumption that the increase in course-completion rates will lead to similar increases in graduation. As mentioned above, the total cost of students at four-year institutions in 2009 who do not complete courses and re-enroll is \$62,300,000. Assuming that only 50 percent of the students re-enroll in coursework, the estimated savings in the first year is \$62.3 million times the annualized decrease in dropped SCHs since 2007 (~1.1 percent) times 50 percent: \$0.341 million. After the first year, the percent decrease in dropped SCHs is assumed to increase gradually to 4.4 percent as of year 4, resulting in a total savings of \$2.8 million based upon FY2009 enrollment and \$3.3 million based upon CTG enrollment.

YEAR	PERCENT DECREASE IN DROPPED SCHs	ANNUAL SAVINGS (FY2009)	ANNUAL SAVINGS (CTG)
01	1.1%	\$341,364	\$400,160
02	1.5%	\$455,152	\$533,547
03	2.2%	\$682,728	\$800,320
04	4.4%	\$1,365,457	\$1,600,640
TOTAL		\$2,844,701	\$3,334,667

Short-term Action 2: Performance Incentive Fund – Current State Practices

See current state practices for *Short-term Action 1: Modify the Formulas*.



Short-term Action 3: Modify TEXAS Grants – Estimated Savings

A recent THECB study in February 2010 concluded that students who entered higher education in 2004 and received a TEXAS Grant graduated within six years at a rate 16 percentage points higher than eligible students who do not receive a TEXAS Grant (51 percent versus 35 percent). The same study showed that TEXAS Grant recipients who meet the criteria contained in the THECB's Priority Model graduated at a rate more than twice the rate of those not meeting the priority criteria (60 percent versus 29 percent).

Short-term Action 3: Modify TEXAS Grants – Current State Practices

Indiana's 21st Century Scholars Program guarantees the cost of tuition at any participating Indiana public institution to income-eligible students who satisfy criteria for good citizenship, including the academic requirement of graduating with at least a 2.0 grade-point average. A key component of this approach is a robust information dissemination campaign to the state's 6th, 7th, and 8th graders. Scholars in Indiana had a total estimated college-going rate (from ninth grade to college) of 85 percent compared to only 65 percent of non-Scholars.¹⁰

Oklahoma's Promise Program is similar to Indiana's approach and pays 100 percent of the tuition at any public state institution for financially needy students who achieve at least a 2.5 grade-point average in the state's college preparatory curriculum in addition to other citizenship-related criteria. In any implementation of a promise-type grant program, success depends largely upon the clarity, predictability, and sustainability of the program. Recipients in Oklahoma experienced similar success as those in Indiana. Eighty-one percent of recipients enrolled in college compared to 56 percent of all Oklahoma graduates and persisted to the second year of college at a rate of 91 percent compared to all other students at 78.4 percent.¹¹

The **Tennessee Education Lottery Scholarship** is a targeted merit program that awards a fixed amount to all students who earn at least a 3.0 grade-point average or 19 ACT score. Income-eligible students receive an additional \$1,000.

MDRC, a research and evaluation firm, has recently published early results from its randomized-design study of the effects of cash incentives to low-income parents at three community colleges in **Ohio** contingent upon achievement of academic outcomes. Students were offered \$1,800 per academic year for earning a "C" or better in 12 or more credits per term, or up to \$900 per academic year for earning a "C" or better in 6 to 11 credits per term. The program increased the number of hours attempted, full-time

¹⁰ See *Results and Reflections And Evaluation Report* from Lumina Foundation for Education at http://www.luminafoundation.org/publications/Results_and_Reflections-Making_the_numbers_add_up.pdf.

¹¹ Blanco, Cheryl, D. (2005). *Early Commitment Financial Aid Programs: Promises, Practices, and Policies*. WICHE. http://www.luminafoundation.org/publications/Results_and_Reflections-Making_the_numbers_add_up.pdf.



enrollment, and number of hours earned, and reduced education loan debt. These results are consistent with those of an earlier MDRC study of a similar program in Louisiana.¹² The demonstration project is also occurring in **California, Arizona, New Mexico, Florida, and New York.**

CREATING CLEAR PATHWAYS FOR SUCCESSFUL STUDENT OUTCOMES

RECOMMENDATIONS

Short-term actions:

1. The Legislature should enact legislation to create statewide articulation agreements, not just for general education, but in those programs that collectively represent 80 percent of the transfer activity.
2. The Legislature should enact legislation to limit the length of associate's degree programs to no more than 60 semester credit hours.
3. The Legislature should require that a minimum of 10 percent of all semester credit hours generated at each institution of higher education be delivered through means other than conventional on-campus classroom activities such as lectures and seminars.
4. Institutions of higher education should improve credit hours produced per full-time equivalent faculty member by 10 percent.
5. The THECB should continue to increase collaboration with the Texas Education Agency (TEA), the State Board for Educator Certification, and public P-12 schools on such issues as improving teacher preparation and quality, promoting the College and Career Readiness Standards, and creating a college-going culture in every public school. Similarly, institutions of higher education should work more closely with local and regional P-12 school systems to improve teacher effectiveness and college readiness. In the long run, higher education can undertake no

¹² Cha, Paulette and Reshma, Patel (2010). Rewarding Progress, Reducing Debt: Early Results from Ohio's Performance-Based Scholarship Demonstration for Low-Income Parents. MDRC.



activity more cost efficient than working more collaboratively with public education to improve college readiness. Finally, two-year and four-year institutions of higher education must collaborate more closely on transfer issues (including two-plus-two programs), college and career readiness efforts, and facilities sharing.

6. Institutions of higher education should incentivize faculty to intervene more aggressively to assist their students in academic difficulty.
7. The Legislature should require students to file a degree plan after the completion of between 30-36 semester credit hours of coursework. Students should be required to meet with an advisor prior to enrolling in courses not included in their degree plans or to changing degree plans.
8. Institutions of higher education should implement competency-based advancement at both the undergraduate and graduate levels so that students can earn credit towards a credential at an accelerated pace based on work experience and the successful completion of rigorous and relevant assessments. Not all students require 15 weeks or a prescribed number of courses to master a defined body of knowledge.

Long-term Action:

1. Institutions of higher education should identify and adopt tools for measuring learning outcomes. Institutions should be able to demonstrate that their graduates have achieved mastery of disciplinary knowledge and basic intellectual skills such as critical thinking, effective communication, and the ability to synthesize substantial amounts of information and data.

ESTIMATED SAVINGS AND CURRENT STATE PRACTICES

Short-term Action 1: Create Statewide Articulation Agreements – Estimated Savings

This estimate is based upon the additional coursework at four-year institutions that graduating transfer students take relative to graduates who start their studies at a four-year institution (i.e., native students). The THECB report *Making Opportunity Affordable – Engineering Articulation Fact Book* identifies this gap in Texas for 2009 graduates from four-year institutions for mechanical engineering, other engineering, and all non-engineering majors. The smallest differential in the number of SCHs is 5 (152 for



transfers; 147 for native students) for non-engineering majors, compared to 13 (154 vs. 141) for mechanical engineering graduates and 11 (150 vs. 139) for other engineering graduates.

$$\begin{aligned} \text{Savings} &= \text{Number of Transfer Students} * \text{Estimated Graduation Rate} * \text{Cost per} \\ &\quad \text{4YR SCH} * \text{Difference in SCHs between Transfer and Native Graduates} \\ &= 34,200 * 80 \text{ percent} * \$292 * \text{Difference in SCHs between Transfer} \\ &\quad \text{and Native Graduates} \end{aligned}$$

The table below provides the estimated savings each year, assuming that the initial statewide average difference for all fields of study is 5 SCHs, 3 after the first year, and 0 in the fourth year. After four years, the total estimated savings based upon FY2009 enrollment is \$39.9 million and \$46.8 million based upon CTG enrollment.

YEAR	DIFFERENCE IN NUMBER OF SCHs	ANNUAL SAVINGS (FY2009)	ANNUAL SAVINGS (CTG)
01	3	\$15,978,240	\$18,730,294
02	2	\$7,989,120	\$9,365,147
03	1	\$7,989,120	\$9,365,147
04	0	\$7,989,120	\$9,365,147
TOTAL		\$39,945,600	\$46,825,735

Short-term Action 1: Create Statewide Articulation Agreements – Current State Practices

Students who earn an associate’s degree in **Florida** are granted admission to the state’s universities as juniors and are admitted to a degree program. In addition, there is a statewide numbering system that applies to a general education core that is common to all institutions. Admission rates to universities are higher for transfer students (76%) than for freshman applicants (57%), and associate’s degree transfer students in public universities graduate with a similar number of credit hours (138) as native freshmen (135).¹³

Arizona has developed the **Arizona General Education Curriculum** which consists of 35 semester units of lower-division coursework. Students who complete a Transfer Pathway in arts, science, or business are guaranteed admission to a state university as a

¹³ WICHE (2010). Promising State Articulation and Transfer Policies. <http://www.wiche.edu/info/publications/PromisingPracticesGuide.pdf>.



junior. These policies were associated with a transfer student completion of a bachelor's degree, with on average, a reduction of one semester credit hour. Transfer Pathway students were more likely to earn a bachelor's degree than non-Transfer Pathway students and did so with fewer credits.¹⁴

Short-term Action 3: Off-campus Instruction – Estimated Savings

The savings are the result of eliminated future Operations and Maintenance Plant Costs (O&M Plant) associated with reductions in the future space needs of institutions, which is 23 million square feet. The future reductions are in terms of increases in the percent of off-campus SCHs relative to the current level which, as of the fall 2009 semester, was approximately 5.3 percent for universities and 13.4 percent for community colleges. Because the community colleges are already above the 10 percent threshold, this estimate is based upon increasing the percent of off-campus SCHs at universities from the current 5.3 percent to 10 percent.

$$\begin{aligned} \text{Savings (4YR)} &= (\text{Total O\&M Plant Cost/Current Square Footage}) * \text{Estimated} \\ &\quad \text{Reduction in Future Space Needs} \\ &= (\$770,448,574/45,355,714) * \text{Estimated Reduction in Future} \\ &\quad \text{Space Needs} \\ &= \$17 * (\text{Target Percent of Off-Campus SCHs} - \text{Current Percent} \\ &\quad \text{of Off-Campus SCHs}) * 23,000,000 \end{aligned}$$

The savings would most likely be realized beyond four years after implementation. The table below reflects the annual savings as the percent of off-campus university SCHs completed increases from the current 5.3 percent to 10 percent, resulting in a total savings of \$50.4 million.

¹⁴ WICHE (2010). Promising State Articulation and Transfer Policies. <http://www.wiche.edu/info/publications/PromisingPracticesGuide.pdf>.



PERCENT OFF-CAMPUS SCHs (4YR)	ANNUAL SAVINGS (FY2009)	ANNUAL SAVINGS (CTG)
7.0%	\$6,593,640	\$7,729,313
8.0%	\$10,548,567	\$12,365,427
9.0%	\$14,503,494	\$17,001,541
10.0%	\$18,458,421	\$21,637,655
TOTAL	\$50,104,122	\$58,733,936

Short-term Action 3: Off-campus Instruction – Current State Practices

In 2005, the **University System of Maryland** adopted a policy that requires first-time freshmen to complete at least 12 credits required for graduation outside of the traditional classroom via online coursework, completion of college credit prior to enrollment, study abroad, etc. At the same time, the University System of Maryland implemented a requirement that the standard degree plan include no more than 120 semester credit hours. The 12-credit requirement, therefore, translates into 10 percent of the standard degree credit requirements. Due to this and other initiatives, the University System of Maryland added 5,000 students in FY2009 with no additional funding for enrollment growth.¹⁵

In fall 2008, 99,836 out of 1,042,091 (9.6%) of all completed SCHs were off-campus. Approximately 58 percent (57,847 SCHs) of the all SCHs completed off-campus were through distance education and online and offline SCHs, 22 percent (21,570) were Advanced Placement (AP) or International Baccalaureate (IB) credit prior to student enrollment, 19 percent (19,105) were independent study, and 1.3 percent (1,314) were study abroad.¹⁶ Note that these results do not include the University of Maryland University Campus, a primarily online institution.

Short-term Action 4: Improve Credit House Produced – Estimated Savings

Estimated savings are calculated based upon a 10 percent decrease in faculty salary costs (9 month) statewide.

¹⁵ See the presentation by William E. Kirwan, Chancellor of the University System of Maryland, to the Advisory Committee on Higher Education Cost Efficiencies at <http://www.theccb.state.tx.us/files/dmfile/KirwanMarylandModel.pdf>.

¹⁶ Maryland Dashboard Indicators 2009.



Savings = (Total 4YR Faculty Salary Costs + (Total 2YR Faculty Salary Costs) * Percent Decrease in Faculty Salary Costs

= (\$1,503,641,827 + \$1,049,726,937) * Percent Decrease in Faculty Salary Costs

= \$ 2,553,368,764 * Percent Decrease in Faculty Salary Costs

The table below projects annual savings, assuming an initial reduction of 4 percent followed by annual reductions of an additional 2 percent of the FY2009 costs thereafter. The total reduction of approximately \$255.3 million based upon FY2009 enrollment after four years represents 10 percent of FY2009.

YEAR	PERCENT DECREASE IN FACULTY COSTS	ESTIMATED ANNUAL SAVINGS (FY2009)	ESTIMATED ANNUAL SAVINGS (CTG)
01	4%	\$102,134,751	\$119,726,195
02	2%	\$51,067,375	\$51,067,375
03	2%	\$51,067,375	\$51,067,375
04	2%	\$51,067,375	\$51,067,375
TOTAL	10%	\$255,336,876	\$272,928,320

Short-term Action 4: Improve Credit Hours Produced – Current State Practices

In 2005, the **University System of Maryland** set the goal that each institution would increase its faculty instructional workload to specified targets. In 2006, the system as a whole reached its targets. The average course units taught at comprehensive institutions was 7.7 against a target of 7.5, and the average at research institutions was 6.0 against a target of 5.5, which represents an increase of 20 percent since 2003 when the average course units taught was 5.0.¹⁷

The State Higher Education Executive Officers (SHEEO) calculated the effect of increasing average faculty workloads from 2.5 classes to 3 classes per semester; the study indicates that such a measure would reduce the number of faculty needed at a 10,000-student campus by 17 percent.¹⁸

¹⁷ Ibid.

¹⁸ State Higher Education Executive Officers and the Education Commission of the States, *An Agenda for Reshaping Faculty Productivity*, by Richard B. Heydinger and Hasan Simsek (Denver, Colorado, November 1992), pp. 21-22.



In 1998, the **State University of New York** surveyed all programs system-wide to identify those with low faculty teaching loads, which led to a reduction of 56 programs that resulted in an annual savings of \$900,000.¹⁹

Faculty teaching loads affect class size. The THECB estimates that a 1 percent reduction in the number of classes offered by Texas universities could potentially make \$7 million available for other purposes.²⁰

Short-term Action 5: Increase P-16 Collaboration – Estimated Savings

Stronger collaboration with public education regarding college readiness would translate into fewer students who require developmental education, resulting in a corresponding decrease in developmental education (DE) costs. Furthermore, those who are still not college-ready would require less intensive intervention.

$$\begin{aligned} \text{Savings} &= \text{Percent Reduction in DE Costs} * \text{Total DE Statewide Costs} \\ &= \text{Percent Reduction in DE Costs} * \$195,977,333 \end{aligned}$$

The table below illustrates the savings, assuming reduced costs of 4 percent of FY2009 expenditures in the first years and 2 percent thereafter.²¹ The total projected savings of \$19.6 million (using FY2009 enrollment) after four years represents 10 percent of FY2009 expenditures of DE statewide. The corresponding total estimated savings based upon CTG enrollment is \$23 million.

¹⁹ New York State Office of the Comptroller, Albany. 1998. State University of New York Teaching Workload, Report 96-S-55. Available at www.osc.state.ny.us.

²⁰ Texas Higher Education Coordinating Board, *Texas General Academic Institutions Class Size Report, Academic Year 1994-95* (Austin, Texas, July 1995), p. 1., as cited in *Texas Performance Review: Disturbing the Peace*, Susan Combs, Texas Comptroller of Public Accounts.

²¹ Note that estimates of impacts as well as current state practices related to transfer and facilities sharing institutions are included elsewhere.



YEAR	REDUCED DE COSTS	ESTIMATED ANNUAL SAVINGS (FY2009)	ESTIMATED ANNUAL SAVINGS (CTG)
01	4%	\$7,839,093	\$9,189,280
02	2%	\$3,919,547	\$4,594,640
03	2%	\$3,919,547	\$4,594,640
04	2%	\$3,919,547	\$4,594,640
TOTAL	10%	\$19,597,734	\$22,973,200

The estimated impacts of increases in the efficiencies associated with transitions from two-year to four-year institutions are included under Estimated Savings - Short-term Action 1 above.

Short-term Action 5: Increase P-16 Collaboration – Current State Practices

The efficiencies related to college and career readiness would be realized through a more precise identification of academic weaknesses and corresponding instruction. In addition, clear articulation of the college and career readiness standards through a single assessment system facilitates collaboration with K-12 districts to increase academic preparedness for college of students while still in high school.

The **Early Assessment Program, for example**, provides participating California high school juniors with information about their academic readiness for college-level work at **California State University (CSU)** campuses. It is an academic preparation program developed by the California Department of Education (CDE), the State Board of Education, and the CSU System to bridge the gap between K-12 educational standards in English and mathematics and the requirements and expectations of postsecondary education at California State University.

The three explicit goals of the Early Assessment Program are as follows: (1) identify students before their senior year who need additional coursework or preparation in English and/or mathematics to succeed at a CSU; (2) provide students, parents, teachers, and administrators with information about their students’ college readiness, and then partner with those parties to increase the quality of academic preparation; and (3) motivate students to take steps in their senior year to achieve readiness for college-level work. The program has three components: an 11th grade test to identify students’ preparedness to undertake college-level work, a professional development component to



aid high school teachers in facilitating improved college readiness among their students, and supplemental preparation for students in their senior year.²²

Participation in the Early Assessment Program reduces the average student's probability of needing remediation at California State University by 6.1 percentage points in English and 4.1 percentage points in mathematics. Rather than discouraging poorly prepared students from applying to Sacramento State University, the Early Assessment Program appears to lead students to increase their academic preparation while still in high school.²³

In Texas, the **El Paso Community College (EPCC)** has been recognized nationally for a similar program they have implemented in collaboration with local K-12 districts. In *Collaborating to Create Change: How the El Paso Community College Improved the Readiness of its Incoming Students Through Achieving the Dream*, Achieving the Dream describes how all K-12 students in the El Paso area participate in its "college readiness protocol," where they take an assessment exam in their junior year of high school and enroll in courses to remediate during their senior year. According to EPCC, the proportion of incoming students college-ready in mathematics increased from 3 percent to 5 percent, 30 percent to 35 percent in reading, and 51 percent to 60 percent in writing.²⁴

Short-term Action 6: Faculty/Student Intervention – Estimated Savings

An estimate for this recommendation is not provided since a subsequent recommendation establishes a goal to increase efficiencies of the path to graduation by 10 percent. This recommendation is a strategy to achieve this goal.

Short-term Action 6: Faculty/Student Intervention – Current State Practices

Research shows that student participation in educationally purposeful activities leads to improved academic outcomes such as GPA and persistence beyond the first year, especially for students with lower academic achievement in higher education as well as low-income and minority students. Focused interactions with faculty and programmatic interventions such as first-year seminars, service-learning, and learning communities are all examples of mechanisms of institutional control.²⁵

²² Information retrieved at http://www.calstate.edu/eap/documents/presentation_cde.ppt#302.

²³ Howell, Kurlander, Grodsky (2010). *Journal of Policy Analysis and Management*, Vol. 29, No. 4, 726-748.

²⁴ Kerrigan, Monica R. and Slater, Doug (2010). *Collaborating to Create Change: How the El Paso Community College Improved the Readiness of its Incoming Students Through Achieving the Dream*. Report #4 in the Culture of Evidence Series. *Achieving the Dream*.

²⁵ Kuh, George D. et al (2008). *Unmasking the Effect of Student Engagement on First-Year College Grades and Persistence*. *The Journal of Higher Education*, Vol. 79, No. 5.



Short-term Action 7: Require Degree Plan – Estimated Savings

An estimate for this recommendation is not provided since a subsequent recommendation establishes a goal to increase efficiencies of the path to graduation by 10 percent. This recommendation is a strategy to achieve this goal.

Short-term Action 7: Require Degree Plan – Current State Practices

One of the most noted scholars in college completion, Vincent Tinto, asserted that students who fail to gain goal clarification are likely to question why they are in college and become at risk of dropping out.²⁶ In its *Framework for State Policies that Support Student Success* as a result of their efforts in multiple states, Achieving the Dream has identified academic advising in developmental education as critical to student success. More specifically, they cite the following two questions as core to increasing student success in higher education:²⁷

- Are students required to declare their program early?
- Are they provided adequate support for making informed decisions?

The empirical evidence supports these recommendations. Developing a plan of study is significantly associated with retention, more credit hours earned, more credit hours passed, and higher GPAs.²⁸

Short-term Action 8: Competency-based Advancement – Estimated Savings

The savings are estimated to result from master's degree students enrolling in a Texas version of Western Governors University (WGU) instead of a traditional master's granting Texas public institution. Cost data for WGU Indiana is not yet available, but for WGU the cost per full-time equivalent student (FTE) is \$6,819. In order to account for additional costs that are associated with being an accredited public institution, the WGU cost per FTE is increased by 20 percent to \$8,183. The cost per student at Texas public Master's granting institutions is \$17,369.²⁹

²⁶ Tinto, V. (2005). Forward: College Student Retention: Formula for Student Success. In A. Seidman (Ed.), *College student retention: Formula for student success* (pp. ix-x). Westport, CT: Praeger Publishers.

²⁷ See <http://www.achievingthedream.org/pdfs/publicpolicy/01framework4.pdf>.

²⁸ Wilson, Elizabeth B., and Kirby, Barbara M. (2005). *Factors Related to Effective Progress Toward Degree Regulations*. Presentation at the AAAE Conference.

²⁹ WGU cost data retrieved from IPEDS. All Texas specific data retrieved from the THECB.



Savings = (Cost per FTE Student at Texas public Master's – 1.20*Cost per student at WGU) * Number of Enrolled Master's Students

= (\$17,369 – 1.20*\$6,819) * Number of Enrolled Master's Students

= (\$17,369 – \$8,183) * Number of Enrolled Master's Students

= \$9,186 * Number of Enrolled Master's Students

The table below reflects the application of this formula to a projected enrollment of master's students, ranging from 5,000 in the first year to 20,000 in year 4, resulting in a total savings after four years of \$459 million.³⁰

YEAR	PROJECTED ENROLLMENT OF MASTER'S STUDENTS	ESTIMATED ANNUAL COST SAVINGS
01	5,000	\$45,931,000
02	10,000	\$91,862,000
03	15,000	\$137,793,000
04	20,000	\$183,724,000
TOTAL		\$459,310,000

In addition, the enrollment of students in online higher education would translate into reductions in future space needs. The corresponding avoided future costs would be realized beyond the four-year window and is calculated as the O&M Plant costs of \$1,719 per student times the enrollment.

YEAR	PROJECTED ENROLLMENT OF MASTER'S STUDENTS	ESTIMATED ANNUAL AVOIDED FUTURE COSTS
01	5,000	\$8,955,000
02	10,000	\$17,910,000
03	15,000	\$26,865,000
04	20,000	\$35,820,000
TOTAL		\$89,550,000

³⁰The FY2009 enrollment statewide of Master's students is 78,190.



Short-term Action 8: Competency-based Advancement – Current State Practices

The State of **Indiana** has recently contracted with Western Governors University to establish **WGU Indiana**, an accredited online public institution that offers bachelor's and master's degrees via a competency-based approach. The tuition structure is \$2,890 per each six-month term. Assuming it takes four-years to earn a Bachelor of Science in Business Management, total tuition at WGU Indiana is approximately \$23,120 compared to \$32,496 for the same degree at Indiana University. According to Western Governors University, the average time to a bachelor's degree is 30 to 35 months.³¹

Long-term Action 1: Measuring Learning Outcomes – Current State Practices

There is a broad range of state approaches to learning outcomes that go beyond the scope of this document. For a more exhaustive treatment of this issue, please see HEPI's report *Measuring Student Learning as an Indicator of Institutional Effectiveness: Practices, Challenges, and Possibilities* available at <http://www.highereducationpolicyinstitute.org/>.

Since 1991, **Oklahoma** has required public colleges and universities to develop and report on assessment criteria and procedures in four areas: entry-level competencies, general education, program outcomes, and student satisfaction. The reports submitted to the state must also include information on assessment results and plans to use those results for program improvement. The assessment methods used are specific to each institution and include both standardized and locally developed exams as well as embedded assessment. Institutions are permitted to fund their assessment efforts through a student fee of up to one dollar per credit hour.

A handful of states have defined core competencies for general education and require institutions to report assessment results in those areas. In **Maryland**, for example, all colleges and universities have been required since 1998 to report every three years on their progress in assessing and improving student learning. The report from 2007 focuses on the assessment of four general education competencies established by the Middle States Higher Education Commission. For each of these competencies—written and oral communication, scientific and quantitative reasoning, critical analysis and reasoning, and technological competency—institutions were asked to provide their definition of the competency and the measures used to assess it. They were also asked to summarize any available assessment findings and explain how those findings are being used for program improvement and planning.

³¹ Sewall, Michael. For the Chancellor of a New Online Campus, Every Workday is About Branding, in *Chronicle of Higher Education*. August 29, 2010.



A few state assessment policies also emphasize public access to student learning outcomes and institutional assessment plans. In **Florida** and **Ohio**, for example, colleges and universities are required to publish their expected learning outcomes and plans for assessing those outcomes on their institutional websites. These sites are then linked to the website of the state higher education agency so that the public can easily find the information.

The use of direct measures of student learning as a statewide performance indicator is rare and is limited to student scores on standardized exams, typically exams that assess general education outcomes. Most often, when standardized exams are used for accountability purposes, each college and university selects the instrument from a list of acceptable options. **Tennessee**, for example, has moved away from requiring a specific standardized exam to assess general education outcomes as part of its incentive funding system. It now allows the use of any general education exam for which comparable national data are available.

South Dakota uses a common standardized exam to measure institutional effectiveness. Since 1997, South Dakota has required all rising juniors to take the reading, writing, math, and science sections of the Collegiate Assessment of Academic Proficiency. The exam is high-stakes for students; failure to pass all four sections of the exams after three attempts prevents further registration at any public university in the state until the student achieves a satisfactory score or demonstrates proficiency through an approved alternative method.

MEETING DEMAND WITH NEW APPROACHES TO DELIVERY

RECOMMENDATIONS

Short-term action:

1. The THECB should exercise its authority to ensure the development of a statewide, user-friendly online delivery system for developmental education and associate degree programs that draw on the best online courses already available, organized under the degree-granting authority of a single public or private entity.

Long-term action:



1. The THECB should develop a strategic growth plan for meeting student demand and identifying a wide variety of cost-effective delivery models.

ESTIMATED SAVINGS AND CURRENT STATE PRACTICES

Short-term Action 1: Online Delivery System – Estimated Savings

This estimate of savings is based upon the projected costs of an online two-year institution relative to the current costs of Texas two-year schools. The same methodology to calculate the savings of creating an online four-year university (see below) was applied with one adjustment. When comparing the relative per student expenditures of Maryland’s online university, the cost advantages come primarily from two types of expenditure: 1) Instructional and Operations, and 2) Maintenance. For the purposes of this estimate, the savings related to instructional costs of an online two-year institution relative to a traditional two-year institution have been forced to zero, resulting in a cost advantage of approximately 6.7 percent. This was done since the existing instructional costs at two-year institutions are low relative to instructional costs at four-year institutions.

The table below projects savings for the first four years of the online two-year institution as a function of the projected enrollment, starting at 5,000 students in the first year and growing to 20,000 in the fourth year. After four years, the total estimated cost savings is \$30.1 million.

YEAR	PROJECTED ENROLLMENT	ESTIMATED ANNUAL SAVINGS
01	5,000	\$3,012,802
02	10,000	\$6,025,604
03	15,000	\$9,038,407
04	20,000	\$12,051,209
TOTAL		\$30,128,022



In addition, the enrollment of students in online higher education would translate into reductions in future space needs. The corresponding avoided future costs would be realized beyond the four-year window and is calculated as the O&M Plant costs of \$1,719 per student times the enrollment.

YEAR	PROJECTED ENROLLMENT	ESTIMATED ANNUAL AVOIDED FUTURE COSTS
01	5,000	\$2,148,750
02	10,000	\$4,297,500
03	15,000	\$6,446,250
04	20,000	\$8,595,000
TOTAL		\$21,487,500

Short-term Action 1: Online Delivery System – Current State Practices

The **University System of Maryland** has created a primarily online public university, the **University of Maryland University Campus (UMUC)**. As of 2010, the enrollment at UMUC was 86,000 students, with 36,000 active-duty military personnel at 150 locations worldwide in 25 countries and 21 on-site classroom locations throughout Maryland, Washington DC, and Virginia.³²

As of FY2008, the cost per FTE student at UMUC was \$13,901 versus \$16,609 for Maryland’s other master’s granting institution, UM Eastern Shores.³³ The in-state tuition and fees for an FTE at UMUC in FY2008 was \$5,520 compared to \$5,988 at UM Eastern Shores. The difference between the cost per FTE student and tuition for in-state full-time students at UMUC is \$8,381 and \$10,621 at UM Eastern Shores.³⁴

The state of **Indiana** has recently contracted with Western Governors University to establish **WGU Indiana**, an accredited online public institution that offers bachelor’s and master’s degrees. The tuition structure is \$2,890 per each six-month term. Assuming it takes four-years to earn a Bachelor of Science in Business Management, total tuition at WGU Indiana is approximately \$23,120 compared to \$32,496 for the same degree at

³² See <http://www.umuc.edu/ip/quickfacts.shtml>.

³³ See <http://www.tcs-online.org/Home.aspx>.

³⁴ See <http://www.usmd.edu/usm/adminfinance/budget/tuitfees>.



Indiana University. According to Western Governors University, the average time to a bachelor's degree is 30 to 35 months.³⁵

Long-term Action 1: Strategic Growth Plan – Estimated Savings

The University of Maryland University College (**UMUC**) and the University of Maryland Eastern Shores (UMES) are both Master's-granting institutions. The estimated savings are based upon the reduced cost per student of **UMUC** relative to UMES. This approach is adopted since both institutions exist within the same policy and state context, which equates as much as possible all other factors that drive costs of higher education. This savings advantage is applied to the average cost per student of Texas Master's-granting institutions for different student populations ranging from 10,000 to 90,000. (The current student enrollment at **UMUC** is approximately 86,000 students.) Research expenditures are not included in costs. The following is based upon 2008 costs.

$$\begin{aligned}
 \text{Savings} &= (\text{Cost per FTE Student at UMUC} / \text{Cost per FTE Student at UMES}) \\
 &\quad * \text{Cost per FTE Student at Texas Master's-IHEs} * \text{Number of Students} \\
 &= (\$13,901 / \$16,609) * \$17,369 * \text{Number of Students} \\
 &= 0.163 * \$17,369 * \text{Number of Students} \\
 &= \$2,831 * \text{Number of Students}
 \end{aligned}$$

This formula is applied to projected student enrollment in the Texas online university ranging from 5,000 in the first year to 20,000 in the fourth year, resulting in a total estimated savings of \$141.6 million. The resulting savings are relative to the current cost per FTSE in a Texas Master's-granting institution.

YEAR	PROJECTED ENROLLMENT	ESTIMATED ANNUAL SAVINGS
01	5,000	\$14,159,921
02	10,000	\$28,319,841
03	15,000	\$42,479,762
04	20,000	\$56,639,683
TOTAL		\$141,599,207

³⁵ Sewall, Michael. For the Chancellor of a New Online Campus, Every Workday is About Branding, in *Chronicle of Higher Education*. August 29, 2010.



In addition, the enrollment of students in online higher education would translate into reductions in future space needs. The corresponding avoided future costs would be realized beyond the four-year window and is calculated as the O&M Plant costs of \$1,719 per student times the enrollment.

YEAR	PROJECTED ENROLLMENT	ESTIMATED ANNUAL COST AVOIDANCE
01	5,000	\$2,148,750
02	10,000	\$4,297,500
03	15,000	\$6,446,250
04	20,000	\$8,595,000
TOTAL		\$21,487,500

Long-term Action 1: Strategic Growth Plan – Current State Practices

See Short-term Action 1: Online Delivery System – Current State Practices

E-textbooks

RECOMMENDATIONS

Short-term action:

1. Institutions of higher education should participate in a pilot study to evaluate the efficacy of e-textbooks in regard to their affordability to both students and institutions and their impact on student learning.

Long-term action:

1. Institutions of higher education should create effective digital learning environments for students.



Background – E-Textbooks

In addition to the Governor's Executive Order to examine the cost of instructional materials, HB 4149 (81st Texas Legislature) directs the THECB to conduct a study and make recommendations regarding electronic textbooks with input from student regents.

According to the Government Accountability Office, as of 2005, textbook prices have increased at twice the rate of inflation over the previous two decades. Textbook costs, which studies have shown to range between \$700 and \$1,000 per year, can lead students to take on more debt to pay for the textbooks, try to succeed in college without access to these important resources, or even drop out of school. The ongoing concern about the impact of textbook prices on college students has yielded legislative action to protect students against high textbook costs, as well as research into more economical alternatives. Digital resources may provide the key to reining in these high costs.

In spring 2009, The University of Texas at Austin began a pilot study on the general use of digital textbooks and examined the feasibility of switching to digital textbooks as a means of reducing the amount students spend on textbooks. Approximately 1,200 students and 8 professors participated in the study, which focused on courses in mechanical engineering, aerospace engineering, accounting, mathematics, and economics. UT-Austin obtained downloadable e-textbooks for each student at around \$25 per text. In addition to the one allowable download, which the student could keep permanently on his or her computer, the students could view the textbook online for up to 18 months and could request a printed copy of the text for \$8-\$10. Although the UT-Austin study suggests that using e-textbooks in this fashion reduces the cost to students by 54 percent, preliminary findings indicate that many students were not happy with the usability of the e-textbooks.³⁶

A former University of Texas System student regent, Karim Meijer, was invited to make a presentation to the Advisory Committee on this issue. Mr. Meijer indicated that he had previously met with student leaders from the UT System Student Advisory Council, as well as student regents from the nine university systems, to obtain their feedback on this issue. In his report to the Advisory Committee, he summarized student comments and concerns as follows:³⁷

³⁶ Kevin Hegarty, personal communication, January 28, 2010.

³⁷ *Report on Textbook Initiative* by Karim Meijer. Available at: www.theccb.state.tx.us/files/dmfile/MeijerTextbookReport.pdf.



In terms of usability, many students were hesitant about the transition because of unforeseen consequences. Some were worried about the picture quality of the digital media, which stemmed from negative experiences they had in class. Others did not think e-textbooks would be as user-friendly for students who learn through writing, highlighting, and annotating in their books. Other students in the humanities were concerned that an e-textbook may not provide the needed “intimacy” with a text. A majority were worried about the effects of reading at a computer screen and the effect on their eyes. Many were unsure whether or not e-readers would be able to solve this concern. However, only one person had used an e-reader for personal use and related its ease on the eyes.

Regarding pricing, about half of the students considered moving to e-textbooks as long as they saved money. The specific amount of savings was not elaborated; however, almost everyone said they would buy if the price were right. The pricing model of the e-textbooks was also a concern, and clarification of who controlled these prices was discussed. Some were afraid university bookstores might monopolize e-textbooks.

In terms of portability, concerns included professor awareness of e-readers and whether or not they would allow students to have these and/or laptops in class. Many students stated that professors do not allow laptops in class and if a transition to e-textbooks occurs, they were concerned professors may limit their ability to have laptops or e-readers during class. Others were curious as to where the e-textbooks would be held, either physically on a hard drive or online where access could be anywhere an internet connection was available.

Another question raised by students was the effect of e-textbooks on non-traditional students who enter universities at older ages. How would these students deal with digital books, and would their ability to learn be affected? Finally, some students proposed that an e-textbook could never be cost-effective as long as students continue to print out the digital versions.

ESTIMATED SAVINGS AND CURRENT STATE PRACTICES

Short-term Action 1: E-textbook Pilot Study – Estimated Savings

Using cost estimates from the UT Austin/Wiley Publishers e-Book Initiative, switching to digital textbooks could reduce the amount students spend on textbooks by 54 percent. It should be noted, however, that national research on student opinion indicates that 70



percent of students would prefer a printed textbook over one read on a computer; similarly, results from the e-book initiative at UT Austin indicated that 75 percent of students would only use a digital text if it were free. “Assuming a student taking 15 semester credit hours spends approximately \$550 per semester on textbooks (industry estimate), and assuming one-half of the books purchased are repurchased at 50 percent of the original purchase price (industry estimate), the e-book initiative at \$40 per book cost would reduce the students cost by \$245.38 per semester for a 54 percent reduction from today’s net cost incurred to purchase physical copies of textbooks.”³⁸

Long-term Action 1: Digital Learning Environment – Current State Practices

There have been multiple efforts to adopt e-textbooks. **Flat World Knowledge** offers digital textbooks that can be viewed online for free, as well as in other formats that can be acquired for a fee – a downloadable PDF file is \$24.95; printed soft-bound books are available for \$29.95 for black-and-white or \$59.95 for color; and some textbooks are offered as audio books in mp3 format for \$39.95. In 2009, the William and Flora Hewlett Foundation awarded \$1.5 million to the **Community College Open Textbook Collaborative**, an attempt to raise awareness among community college instructors about the availability of free, high-quality digital textbooks. Academic partners in the consortium include **Rice University’s Connexions**, the **California-based Faculty Collaborations for Course Transformations Program**, the **Florida Distance Learning Consortium**, the **California Community Colleges Chancellor’s Office**, the **Institute for the Study of Knowledge Management in Education (ISKME)**, and the **League for Innovation in the Community College**.³⁹

These are not the only sources of free course material however; **MIT’s Open Courseware**, **Carnegie Mellon’s Open Learning Initiative**, and the **Multimedia Educational Resource for Learning and Online Teaching (MERLOT)** are three examples of other major open source initiatives that provide everything from lecture notes to tutorial videos and computer-based tutoring.

³⁸ Quote from the UT Austin / Wiley Publishers e-Book Initiative (2010).

³⁹ Community College Consortium for Open Educational Resources. (2009, August 10). *Initiative Focuses on Expanding Free Online Textbooks*. Press Release. Retrieved February 3, 2010, from <http://cccoer.files.wordpress.com/2009/01/initiative-focuses-on-expanding-free-online-textbooks-aug10-press-release1.doc>.



MAKING CAPITAL FINANCING MAKE SENSE

RECOMMENDATION

Long-term action:

1. Either by legislative action or Governor’s Executive Order, the THECB should be directed to develop a recommended approach to capital financing with special attention given to developing an alternative to the use of Tuition Revenue Bonds.

ESTIMATED SAVINGS AND CURRENT STATE PRACTICES

Long-term Action 1: New Approach to Capital Financing – Estimated Savings

Between FY2002 and FY2011, the appropriated TRB debt service has increased by approximately 13.2 percent per year, resulting in a total of \$330.6 million in FY2011. The estimated savings are based upon a projected 10 percent annual increase. The total estimated savings after four years is \$145.4 million.

YEAR	PROJECTED ENROLLMENT	ESTIMATED ANNUAL SAVINGS
01	5,000	\$11,571,046
02	10,000	\$25,861,288
03	15,000	\$43,353,528
04	20,000	\$64,607,317
TOTAL		\$145,393,179

Long-term Action 1: New Approach to Capital Financing – Current State Practices

States use various mechanisms and processes. For a survey of these funding mechanisms and processes, see the *Public Higher Education Capital Funding: A Survey*



of 37 States published by the Texas Council of Public University Presidents and Chancellors in 2006 in response to proposals to change the current tuition revenue bond process in Texas.⁴⁰ Results indicated that

- ◆ In 30 (81 percent) of responding states, the legislature determines which capital projects will be funded.
- ◆ Twenty-seven (73 percent) of responding states appropriate debt service for state-issued debt.
- ◆ Twenty-three (62 percent) of responding states may receive state appropriations for the total construction costs of a project.
- ◆ Twenty-three (62 percent) of responding states indicated that the state requires the institutions/systems to share in capital project debt at some level, with 14 of these states reporting the share requirement varies by project.
- ◆ Thirty-two (87 percent) of responding states are not required by the state to pledge tuition revenues for capital building projects.
- ◆ Eight (22 percent) of responding states reported the use of a revolving bond fund to support debt issuance for university facility projects.
- ◆ Twenty-nine (78 percent) of responding states reported their universities/systems are authorized to issue debt independently.
- ◆ Fifteen (41 percent) of responding states have formulas to measure the needs for classroom, research, and administrative space. Of these, three states reported the state funds these types of buildings differently.

Furthermore, the same report cites the 1999 report *Capital Budgeting in the States* by the National Association of State Budget Officers, which found that states that were most satisfied with their capital budgeting process had a formal mechanism to inform the legislature of the capital needs.⁴¹ Other notable findings include

- ◆ Statutes passed in 1999 in **California** require the Governor to submit annually, in January, a comprehensive five-year infrastructure development plan for state agencies, K12 schools, and higher education institutions, along with a proposal for funding those proposals.
- ◆ **The University System of Georgia** announced plans to introduce legislation in the 2006 session that would create a new state authority to address construction-funding needs at the state's public colleges, universities and technical colleges.

⁴⁰ See http://www.cpupc.org/images/CPUPC_Capital_Funding_Report_4-06.pdf.

⁴¹ National Association of State Budget Officers (1999) *Capital Budgeting in the States*. <http://www.nasbo.org/Publications/PDFs/CapitalBudgeting1999.pdf>.



The proposed Georgia Higher Education Facilities Authority would have the power to make and execute contracts and leases, and to extend credit or make loans for the planning, design, construction, acquisition and refinancing of projects.

Also completed in 2006, another survey of capital funding systems of all 50 states found that⁴²

- ▶ Over 90 percent of states do not require institutions to set aside funds from their appropriations for renewal and replacement.
- ▶ Sixty-five percent of states do not have a coordinated master plan for facilities to prioritize needs.
- ▶ Seventy-seven percent of states do not conduct regular facilities audits.
- ▶ Funding formulas are not used in most states during the request phase by state higher education agencies to request funds for capital needs.

MAKING PRODUCTIVITY AND CONTINUOUS IMPROVEMENT A CULTURAL CHANGE

RECOMMENDATIONS

Short-term actions:

1. The Legislature should mandate that each institution increase the cost efficiency with which it produces graduates by 10 percent.
2. The THECB should create a Statewide Higher Education Continuous Improvement Council (CIC) within the THECB as a mechanism for promoting and institutionalizing efficiencies at all levels – campus, system, and state.
3. Institutions of higher education should adopt and expand established best practices in cost efficiencies already in place at other institutions in Texas.

Degree and certificate efficiencies

⁴² Manns, Derrick A., and Katsinas, Stephen G. (2006). *Capital Funding Practices in Public Higher Education*. <http://www.appa.org/FacilitiesManager/article.cfm?ItemNumber=2551&parentid=2540>.



- i. The THECB should require institutions of higher education to close down low-producing degree programs.
- ii. Institutions of higher education should engage in more multi-institutional arrangements for delivering courses, especially those in small majors.
- iii. Institutions of higher education should develop class schedules that utilize more hours of the day and days of the week. Increased use of existing facilities should be accomplished before new facilities are approved.
- iv. Institutions of higher education should more clearly state the expectation that full-time students' course workload is 30 semester credit hours per calendar year.
- v. Institutions of higher education should adopt a computer-based assessment system for developmental education.

Administrative efficiencies

- i. Institutions of higher education should streamline administrative processes across institutions and set standards for the number of appointed administrative positions and salary levels that are consistent with best practices, such as those noted by Bain & Company's diagnostic report, *Achieving Operational Excellence at the University of California, Berkeley*.
- ii. Institutions of higher education should expand even further the size of procurement pools in such areas as energy, software licenses, and insurance (both health and property) by creating statewide pools among community colleges and/or universities, similar to those already developed by The University of Texas and Texas A&M University Systems.
- iii. Institutions of higher education should consolidate and out-source services such as e-mail and other information technology when cost efficient.
- iv. The THECB should review the current statewide data system and identify additional information required for decision making and policy analysis in order to create the nation's most user-friendly higher education statewide data warehouse.
- v. The THECB should work with other entities to expand TexShare, the current online library system, to include additional materials as identified by institutions of higher education.



ESTIMATED SAVINGS AND CURRENT STATE PRACTICES

Short-term Action 1: Graduating Students More Cost Efficiently – Estimated Savings

This recommendation is an overarching goal to realize 10 percent efficiency in producing graduates that has implications for every aspect of higher education. The estimated savings, therefore, for this recommendation is based upon instructional, academic support, student services, institutional support, operations and maintenance, and scholarships/fellowships costs. Estimates assume a statewide average of five-years to graduation for four-year institutions and three years for two-year institutions.

Savings (4YR) = Cost per FTE * 5 Years * Number of Graduates * Percent Savings in Cost to Graduation

= \$6,167 * 5 Years * 111,169 Graduates * Percent Savings in Cost to Graduation Savings (2YR)

= Cost per FTE * 3 Years * Number of Graduates * Percent Savings in Cost to Graduation

= \$3,700 * 3 Years * 61,309 Graduates * Percent Savings in Cost to Graduation

The table below estimates annual savings for projected decreases in cost to graduation starting at 1 percent in the first year and increasing to 10 percent in the fourth year, for a total estimated savings of \$2.0 billion.

YEAR	PROJECTED PERCENT DECREASE	ESTIMATED ANNUAL SAVINGS (FY2009)	ESTIMATED ANNUAL SAVINGS (CTG)
01	1%	\$98,292,474	\$115,222,134
02	3%	\$294,877,421	\$345,666,401
03	6%	\$589,754,842	\$691,332,803
04	10%	\$982,924,737	\$1,152,221,338
TOTAL		\$1,965,849,474	\$2,304,442,676



Short-term Action 1: Graduating Students More Cost Efficiently – Current State Practices

The **Ohio Board of Regents** successfully responded to legislative mandates to reduce the overall system budget by 1 percent and 3 percent in succeeding sessions through focused effort to reduce costs of instruction through multiple means and efforts. Since 1999, the median time-to-degree for bachelor's degrees decreased from 4.7 to 4.3 years in 2003 and has remained at this level through 2007.⁴³

In **Maryland**, systemic reengineering of administrative processes has removed more than \$130 million in direct costs system-wide. Tuition from 2006 to 2009 was flat and was followed by a 3 percent increase in 2010. Maryland went from the 6th highest tuition in the country in 2004 to a projected 21st in 2011.⁴⁴

Furthermore, faculty classroom contact hours in Maryland's undergraduate research universities is up 20 percent, community college transfer rates are at an all-time high, time-to-degree is at an all-time low of 4.5 years, four- and six-year graduation rates are above the national averages, and there was no additional funding for an additional 5,000 student enrollment growth.⁴⁵

Short-term Action 2: Continuous Improvement Council – Estimated Savings

The CIC would identify inefficiencies across the board, which would result in decreases in the overall costs of graduating students as reflected in the recommendation above.

Short-term Action 2: Continuous Improvement Council – Current State Practices

Since 2004, the Chairman of the **University System of Maryland Board of Regents** and the Chancellor have co-chaired the **Effectiveness and Efficiency Work Group (E&E Workgroup)** consisting of other regents and the USM leadership. The E&E Workgroup spearheads all work that focuses on reducing costs and increasing effectiveness. It is a standing group comprising members with authority and in a position to relate on-going activities to other priorities of the system.

⁴³ See <http://www.sheeo.org/hepconfsite/hepc2009/Thursday/WhatisCostEffectiveHigherEd08.06.pdf>

⁴⁴ See the presentation by William E. Kirwan, Chancellor of the University System of Maryland, to the Advisory Committee on Higher Education Cost Efficiencies at <http://www.theccb.state.tx.us/files/dmfile/KirwanMarylandModel.pdf>

⁴⁵ Ibid.



The E&E Workgroup consults with the campus communities on an on-going basis to identify alternative models of service delivery, reductions in administrative and other costs, and the adoption of new standards for benchmarking and accountability reporting based on best practices in higher education and other sectors. It monitors activities and reviews results based upon pre-established benchmarks.

Ohio created a senior-level position dedicated to cost containment: Associate Vice Chancellor of Affordability and Efficiency. The very act of creating this position sends clear signals to institutions that the issue of cost reduction will be a long-term priority of the state. Indeed, Ohio is focused on a “Continuous Improvement” model for all its outcomes, including cost efficiency. The state has organized permanent and dedicated working groups for each of the following five focus areas: Energy, Academics, HR & Administration, IT & Education, and Purchasing. Each working group consists of state agency personnel and institutional representatives who work collaboratively to develop cost efficiency measures that will apply to all institutions. They identify institution-specific targets for each measure and their corresponding estimated budget savings. One of the primary functions of the E&E Workgroup in **Maryland** and the focus area working groups in **Ohio** is to serve as a clearinghouse for innovative practices. In both states, innovative practices both within-state as well as from across the country are identified and shared across institutions.

The practices adopted in Ohio and Maryland are examples of performance-based management in higher education which have been formalized in various models including the **Baldrige Framework, LEAN management, and Responsibility Centered Management. Richland College in Texas** has gained national recognition for being the first community college in the nation to earn the Malcolm Baldrige National Quality Award in 2005.

LEAN management has been implemented in higher education in a number of institutions. The **University of Iowa** realized \$500,000 in cost reduction or avoidance in its first year of implementation in 2006, with expectations of future savings as LEAN becomes more widespread on the campus.⁴⁶ At the **University of Texas at Dallas**, LEAN management has led to a reduction of people hours spent on bank reconciliation per month from 120 to 32; \$421,299 in utility savings while adding 234,698 square feet;

⁴⁶ Balzer, William K. (2010). *Lean Higher Education: Increasing the Value and Performance of University Processes*. CRC Press.



and a reduction of 10,000 sheets of paper used in the annual budget submission process.⁴⁷

Indiana University was the first institution to adopt Responsibility Centered Management (RCM), which has since spread to 46 percent of private and 8 percent of public universities nationwide as of 2007 according to the University of New Hampshire RCM effort.⁴⁸

These are higher education examples of an overall trend in government towards performance-based management. As far back as 1991, 15 state agencies in Oregon piloted an effort to transition to performance measures to track progress towards its state goals of attracting “Exceptional People,” building “Outstanding Quality of Life,” and building a “Diverse, Robust Economy.”⁴⁹

More recently, the **Iowa Coalition for Innovation and Growth** approached the state environmental agency in 2003 to identify barriers to business development. They adopted the LEAN continuous improvement model that soon spread to other agencies and as of 2006 received legislative funding for an **Office of LEAN Enterprise within the Department of Management.**⁵⁰

Short-term Action 3.a.i: Low-producing Degree Programs – Estimated Savings

When a program is dropped, potential savings will be derived primarily from changes in student behavior and reduced faculty needs. Students can do one of three things: continue in a closely related field, transfer to another field/institution, or drop out. For the purposes of this analysis, we are assuming that students continue in a closely related field, the cost of which is approximately the same as the program that is dropped. There are no cost savings, therefore, due to student response to the dropped program.

The cost savings, then, will be based upon reduced faculty. When a program is dropped, there will be a range of departmental responses. On the most conservative side, they will not hire additional faculty and re-assign existing faculty, resulting in no savings. Other departments will re-assign or actually let faculty go.

⁴⁷ Presentation to the Advisory Committee on Higher Education Cost Efficiencies. See <http://www.thecb.state.tx.us/files/dmfile/JamisonLeanManagementUTDallas.pdf>

⁴⁸ See www.unh.edu/rcm/RCM.ppt

⁴⁹ Broom, Cheryl, A. (1995). Performance-Based Government Models: Building a Track Record. *Public Budgeting & Finance*. Vol 15, Issue 4, pages 3-17.

⁵⁰ See <http://lean.iowa.gov>



There is no reliable way to estimate the number of faculty that are attached to a low-producing program or how institutions will respond to a directive to drop a program. Thus, for each level (applied associate's, baccalaureate, master's, and doctorate), it is estimated that the average number of reduced FTE faculty statewide as the product of the total number of low-producing programs and the statewide average number of reduced FTEs ranging from .25 to 0.75 FTEs in increments of .25. This range is based upon the experiences of one institution that has undergone this exercise and found that the number of reduced FTEs per dropped program ranged from approximately 0.2 to 0.6. The avoided costs are this product times the average statewide salary of faculty for each level.

FACULTY REDUCTION RATE	APPLIED ASSOCIATES		BACCALAUREATE		MASTERS		DOCTORATE		TOTAL	
	REDUCED FTEs	AVOIDED COSTS	REDUCED FTEs	AVOIDED COSTS	REDUCED FTEs	AVOIDED COSTS	REDUCED FTEs	AVOIDED COSTS	REDUCED FTEs	AVOIDED COSTS
0.25	33	\$1,744,842	71	\$3,754,054	55	\$6,031,080	29	\$3,125,196	188	\$14,655,172
0.5	66	\$3,489,684	142	\$7,508,108	110	\$12,062,160	57	\$6,250,392	375	\$29,310,344
0.75	99	\$5,234,526	213	\$11,262,162	165	\$18,093,240	86	\$9,375,588	563	\$43,965,516

The table below projects the average response of institutions over time with an initial statewide faculty reduction rate of 0.5 FTEs followed by 0.25 FTEs thereafter for a total estimated savings of \$73.3 million after four years.

YEAR	FACULTY REDUCTION RATE	ESTIMATED ANNUAL SAVINGS
01	0.5	\$29,310,344
02	0.25	\$14,655,172
03	0.25	\$14,655,172
04	0.25	\$14,655,172
TOTAL		\$73,275,860

Short-term Action 3.a.i: Low-producing Degree Programs – Current State Practices



Louisiana has recently initiated efforts to review under-performing and duplicative programs. The **Louisiana Postsecondary Education Review Commission** directed its Board of Regents in 2009 to weed out unnecessary and duplicative programs. In addition, the governor of Louisiana announced **LA GRAD Act** in February of 2010 which includes continued reductions of low-producing programs.

In 2003, the **Tennessee Board of Regents (TBR)** placed under review 70 low-producing programs, resulting in board approval to eliminate 43 of the 70 programs. Among them were Master's degrees in physical education, mathematics, and music education, as well as a B.S. in Industrial and Systems Engineering. At the community colleges, programs eliminated included Applied Associate of Science programs in Biomedical Engineering Technology, Medical Assisting, and Office Administration. In 2006, completing the first three-year cycle, the board voted to eliminate 34 academic programs at TBR universities and community colleges. In addition, the 70 programs under final review this year were placed on monitoring status. The initiative has become an annual exercise. In 2009, a total of 29 programs were terminated due to low production.⁵¹

Short-term Action 3.a.ii: Multi-institutional Arrangements – Estimated Savings

In the description of current state practices below, Coppin State University realized a savings of \$50,000 by expanding a joint program to the University of Baltimore. The methodology of this estimate assumes that the savings associated with one course is 10 percent of this cost, or \$5,000 per course. The statewide savings, therefore, is \$5,000 times the number of courses, which the table below illustrates starting at 20 courses in the first year and growing to 140 courses after four years for a total savings of \$1.6 million.

⁵¹ See *Conclusions from the THECB 2009 Program Review* at <http://www.tennessee.gov/thec/Divisions/AcademicAffairs/THCB%20Agenda%20Academic%20Program%20FINAL%20Jan%2021%202010.pdf>.



YEAR	NUMBER OF COURSES	ESTIMATED ANNUAL SAVINGS
01	20	\$100,000
02	60	\$300,000
03	100	\$500,000
04	140	\$700,000
TOTAL		\$1,600,000

Short-term Action 3.a.ii: Multi-institutional Arrangements – Current State Practices

A number of institutions in the **University System of Maryland** have collaborated in the delivery of coursework. For example, **Coppin State University** reported that they saved an estimated \$50,000 by expanding a joint master’s program in Human Resource Management with the **University of Baltimore**. **Salisbury University** estimated a savings of \$139,000 by implementing two dual-degree programs and one graduate program in collaboration with the **University of Maryland Eastern Shores**.⁵²

Higher Education Centers (HECs) are centers where a number of institutions offer courses and programs. It is often the case that institutions systematically audit course and program offerings available at the HEC to ensure that duplication is not occurring. In **Texas** as of July 2010, there are seven such centers with recent approval of two additional centers.⁵³

In 1987, the **South Carolina Commission on Higher Education** approved the Greenville Higher Education Center, an effort that traces its roots back to the Greenville Chamber of Commerce in 1981. As of 2006, the center hosted 629 course sections across 22 undergraduate programs and 36 graduate programs. At \$45 per credit hour in 2006, the estimated costs of one academic year of full-time in-state enrollment is approximately \$1,080 at the Greenville Higher Education Center compared to an average of \$4,324 in tuition and fees at regional universities in South Carolina, an average of

⁵² See <http://www.usmd.edu/usm/workgroups/EEWorkGroup/eeproject/eereports.html>.

⁵³ THECB (2010). The Feasibility of Expanding Texas’ Community College Baccalaureate Programs: A Report to the 81st Texas Legislature.



\$2,834 in tuition and fees at technical colleges, and an average of \$3,132 in tuition and fees at community colleges.⁵⁴

Short-term Action 3.a.iii: Classroom Utilization – Estimated Savings

The efficiencies would result from reduced future O&M Plant costs that would most likely be realized beyond four years after implementation, and are estimated for projected reductions in future space starting at 4 percent and climbing to 10 percent, for a total savings of \$221.6 million after four years. For more details on the methodology, see *Short-term Action 2* under the section *Creating Clear Pathways for Successful Student Outcomes*.

PROJECTED REDUCED SPACE	ESTIMATED AVOIDED FUTURE COSTS
4%	\$31,653,373
6%	\$47,480,060
8%	\$63,306,746
10%	\$79,133,433
TOTAL	\$221,573,612

Short-term Action 3.a.iii: Classroom Utilization – Current State Practices

Texas A&M University (TAMU) has adopted a centralized scheduling system supported by a specialized software package that has led to increases in classroom utilization efficiency. Historically, TAMU has not met the THECB Classroom Utilization Guide. Starting in 2008, however, it has met or exceeded the guide and now ranks 3rd in the state in space utilization efficiency. The system allows for better inventory accuracy, and stronger use control, and provides an enhanced planning tool for new and renovated classroom construction.

In 2006, **Florida’s Office of Program Policy Analysis and Government Accountability** provided the following recommendations to the legislature designed to

⁵⁴ See <http://www.che.sc.gov/Finance/Abstract/Abstract2006web.pdf>.



improve the classroom utilization efficiency of its higher education institutions in order to preclude future capital outlays.⁵⁵

- ◆ The Legislature should consider requiring public colleges and universities to demonstrate that they have implemented comprehensive strategies to maximize use of existing classrooms before approving funding for additional classroom space. At a minimum, strategies should address
 - scheduling more class time to non-peak classroom usage periods;
 - fully utilizing Fridays when scheduling classes;
 - providing tuition incentives to students to take classes during non-peak times; and
 - establishing institutional classroom usage goals, reviewing scheduling processes, and routinely collecting and reporting facility usage data on all campuses.
- ◆ Each postsecondary institution should report to its board of trustees, DOE, and the Board of Governors on the success of these strategies and provide utilization data by day of week and hour of day when requesting additional classroom space.
- ◆ The Legislature may wish to consider providing universities flexibility to offer variable tuition for classes scheduled during peak and off-peak demand times. Given the uncertainty regarding the effects of variable tuition, the Legislature could pilot a variable tuition program to determine the impact on classroom utilization, student enrollment patterns, and tuition revenue prior to granting tuition flexibility to all universities.
- ◆ Because national research shows that classroom utilization is a relatively good indicator of how efficiently other higher education space is used, local boards of trustees, DOE and the Board of Governors should consider requiring postsecondary institutions to examine how efficiently they use all major categories of space and consider this information when determining, prioritizing and funding fixed-capital outlay projects. This information can be provided in the institution's capital improvement plan.

⁵⁵ Office of Program Policy Analysis & Government Accountability (2006). *Higher Education Facility Construction Costs Are Reasonable; Some Improvements Could Maximize use of Campus Classroom Space*. Report No. 06-31.



Short-term Action 3.a.iv: Full-time Student Course Workload – Estimated Savings

The efficiencies would result from reduced future O&M Plant costs that would be realized beyond four years after implementation and are estimated for projected reductions in future space starting at 4 percent and climbing to 10 percent, for a total savings of \$221.6 million. For more details on the methodology, see *Short-term Action 2* under the section *Creating Clear Pathways for Successful Student Outcomes*.

YEAR	PROJECTED REDUCED SPACE	ESTIMATED ANNUAL AVOIDED FUTURE COSTS
01	4%	\$31,653,373
02	6%	\$47,480,060
03	8%	\$63,306,746
04	10%	\$79,133,433
TOTAL		\$221,573,612

Short-term Action 3.a.v: Computer-based assessment system for Developmental Education – Estimated Savings

Reduced costs would result from more efficient placement and progression of students through developmental education. The table below presents estimated savings that correspond to decreases in costs of developmental education ranging from 2 percent to 6 percent in increments of 2 percent. It employs the same approach used in *Short-term Action 4* under the section *Creating Clear Pathways for Successful Student Outcomes*.



Short-term Action 3.a.v: Computer-based Assessment System for Developmental Education – Current State Practices

YEAR	PROJECTED REDUCED DE COSTS	ESTIMATED ANNUAL SAVINGS (FY2009)	ESTIMATED ANNUAL SAVINGS (CTG)
01	2%	\$3,919,547	\$4,594,640
02	2%	\$3,919,547	\$4,594,640
03	2%	\$3,919,547	\$4,594,640
04	4%	\$7,839,093	\$9,189,280
TOTAL	10%	\$19,597,733	\$22,973,200

In 2006, the **Tennessee Board of Regents** initiated its review of developmental education in search of strategies that would increase the effectiveness and lower the cost of providing developmental education. A key component of this initiative is to utilize the National Center for Academic Transformation to incorporate instructional technology. At the heart of this effort was the utilization of computer-based assessments to assess, diagnose, place, and monitor improvement.

- The results of three pilot sites showed increased success rates, improved student learning, and increased retention.⁵⁶ At one site, the pilot effort reportedly led to \$50,000 in savings realized through a 23 percent increase in faculty productivity. The average student load per faculty member increased from 106 to 130, and the FTE student teaching load per faculty member increased from 21.2 to 26.
- In Texas, the **El Paso Community College** has been recognized nationally for their work with the National Center for Academic Transformation in adopting computer-based assessment and instruction in developmental education. The use of computer-based assessment and instruction allows students to progress at their own rates. El Paso Community College found that approximately 10 percent of developmental education students complete more than one developmental course within a traditional 15-week semester.⁵⁷

⁵⁶ See www.ecs.org/html/meetingsEvents/NF2009/resources/ShiftingDevelopmentalStudies%20.pps - 2009-07-14.

⁵⁷ Personal communication with representative of El Paso Community College. February 24, 2010.



Short-term Action 3.b.i: Streamline Administrative Processes – Estimated Savings

The methodology for this estimate assumes that the savings of applying a Bain & Company approach in Texas is proportional to the non-instructional expenditures, which amounted to approximately \$1.1 billion at UC Berkeley and \$4.2 billion in Texas universities.⁵⁸ See Current State Practices below for more detail on the Bain & Company approach.

Estimated Cost Savings =

$$\text{(Non-Instructional Expenditures in Texas Universities/ Non-Instructional Expenditures at UC Berkeley) * Estimated Savings at UC Berkeley}$$

The table below depicts the estimated annual savings for the first four years assuming the same projected savings rates of Bain & Company at UC Berkeley starting at approximately 2% of total non-instructional expenditures in the first year and ramping up to 6.5% by the third year.

YEAR	PROJECTED PERCENT SAVINGS	ESTIMATED ANNUAL SAVINGS (FY2009)	ESTIMATED ANNUAL SAVINGS (CTG)
01	2%	\$83,465,688	\$97,841,618
02	3%	\$125,198,532	\$146,762,427
03	6.5%	\$273,183,401	\$320,235,856
04	6.5%	\$271,263,487	\$317,985,259
TOTAL		\$753,111,108	\$882,825,161

The Bain & Company estimates an initial investment of approximately \$50-\$70 million over the first three years and a \$5 million in annual ongoing investments thereafter. This equates to approximately 4.4% to 6.1% of non-instructional expenses over the first three years and 0.44% thereafter. The estimated annual net savings is the difference between the estimated savings and the investment required to realize the savings. The table below reflects net annual savings assuming investments that total 6.5% of non-instructional expenses statewide in Texas (\$4.2 billion) spread out over the first three years, and 0.44% towards annual investment thereafter.

⁵⁸ See <http://www.txhighereddata.org> and <http://nces.ed.gov/ipeds/datacenter/>.



YEAR	PERCENT INVESTMENT	PROJECTED INVESTMENT	ESTIMATED ANNUAL NET SAVINGS (FY2009)	ESTIMATED ANNUAL NET SAVINGS (CTG)
1	3.25%	\$135,631,743	-\$52,166,055	-\$61,151,011
2	2.25%	\$93,898,899	\$31,299,633	\$36,690,607
3	1.00%	\$41,732,844	\$231,450,557	\$271,315,047
4	0.44%	\$18,212,227	\$253,051,260	\$296,636,202
TOTAL		\$289,475,713	\$463,635,395	\$543,490,844

Short-term Action 3.b.i: Streamline Administrative Processes – Current State Practices

In April 2010, Bain & Company presented its Final Diagnostic Report to **the University of California at Berkeley** that included recommendations from the UC Berkeley Operational Excellence Steering Committee to increase cost efficiency along with impact estimates.⁵⁹ The report recognizes that in order for UC Berkeley to continue being a world-class teaching and research university, it will have to address organizational performance and financial sustainability. The Steering Committee met monthly for six months and engaged over 700 people across campus in addition to multiple electronic and traditional methods of soliciting input from the university community.

The report recommends the pursuit of a commitment to a high-performance operating culture and a redesign of a disciplined financial management model as critical enablers to achieve excellence in procurement, organizational simplification, IT, energy management, and student services. The Steering Committee set a target of \$75 million in annual savings in the third year after implementation of their recommendations.

Short-term Action 3.b.ii: Expand Procurement Pools – Estimated Savings

A recent survey of institutional cost savings by project shows savings of \$5.6 million for shared services between institutions. Estimates are based upon expanding existing pools statewide and identifying additional opportunities, resulting in additional savings from 5 percent – 25 percent of the current \$5.6 million, for a total estimated savings after four years of \$25.2 million.

⁵⁹ See <http://berkeley.edu/oe/phase1/phase1-full.pdf> for the full report.



YEAR	PROJECTED INCREASE IN SAVINGS	ESTIMATED ANNUAL SAVINGS (FY2009)	ESTIMATED ANNUAL SAVINGS (CTG)
01	5%	\$5,877,900	\$6,890,295
02	10%	\$6,157,800	\$7,218,405
03	15%	\$6,437,700	\$7,546,514
04	20%	\$6,717,600	\$7,874,623
TOTAL		\$25,191,000	\$29,529,837

Short-term Action 3.b.ii: Expand Procurement Pools – Current State Practices

The **Ohio Regents** have established Efficiency Councils as permanent bodies to identify opportunities for cost savings across the board, including expanded procurement pools. In FY2009, approximately 58 percent (\$124,627,000) of the total savings identified were through the use of competitive or collaborative bidding.⁶⁰ Examples of strategies include expanding existing insurance consortia, establishing new cooperative purchasing agreements across institutions, and increased utilization of *existing* cooperative purchasing agreements.

The University of Texas System has experienced substantial savings through multiple shared services efforts. Since 2006, shared data centers have saved \$17.7 million and shared software applications have saved \$18.7 million since 2007. In FY2009, strategic purchasing has saved \$8.0 million and is expected to grow to over \$20.0 million annually.

Short-term Action 3.b.iii: Consolidation and Out-sourcing – Estimated Savings

Estimated savings derive from converting email systems from a traditional Microsoft Exchange server to a cloud-based service (e.g. Google mail, Microsoft Live). This estimate assumes that half of all institutions have already made this conversion and that the remaining institutions will make this transition for both student and faculty/staff systems. After four years, the total estimated savings is \$34.3 million.

⁶⁰ Calculations based on Ohio cost-saving reports.



YEAR	PERCENT OF TRANSITIONED INSTITUTIONS	ESTIMATED ANNUAL SAVINGS (FY2009)	ESTIMATED ANNUAL SAVINGS (CTG)
01	70%	\$7,070,000	\$8,287,720
02	80%	\$8,080,000	\$9,471,680
03	90%	\$9,090,000	\$10,655,640
04	100%	\$10,100,000	\$11,839,600
TOTAL		\$34,340,000	\$40,254,640

Short-term Action 3.b.iii: Consolidating and Outsourcing – Current State Practices

The **University of North Carolina** and **North Carolina State Universities** have consolidated their human resources, payroll, and finance information technology systems resulting in estimated savings of approximately \$3 million annually.⁶¹ The annual cost-savings at **Arizona State University** of consolidating and converting their student email system to Google is approximately \$400,000.⁶² Similarly, **Kent State University** reduced internal administrative costs of their email system between 80 percent and 90 percent by transitioning their email system to Google.⁶³

The **University of Texas at San Antonio (UTSA)** converted its student email system to Google to remove the cost of email servers and storage systems, which account for the vast majority of maintaining a Microsoft Exchange email system. This has translated into approximately \$400,000 in saving over the last three years.⁶⁴ Note that because the UT System has a system-wide license for Microsoft Exchange, UTSA does not have to pay this license cost. For institutions that do pay their individual licensing costs for Microsoft Exchange, the transition to a Google or MS Live solution would present even greater savings.

Short-term Action 3.b.iv: Statewide Data System – Current State Practices

The **Texas Student Data System of the Texas Education Agency (TEA)** is funded by \$10 million from the Susan and Michael Dell Foundation and \$18.2 million from the

⁶¹ See <http://www.insidehighered.com/news/2010/06/29/carolina>.

⁶² See <http://www.informationweek.com/news/internet/showArticle.jhtml?articleID=198100546>.

⁶³ <http://einside.kent.edu/?type=art&id=90788>.

⁶⁴ Personal communication with representative of UT San Antonio.



Institute of Education Sciences. After its estimated implementation schedule of five years, school districts will have the option to utilize a state-sponsored student information system (SIS) or another web-based SIS system. The SIS data for all districts in the state will compose the District Connections Database and will be housed on a central data server.

The District Connection Database will be used as a basis for development of school and district dashboards and other business intelligence tools. Since the full range of data in district SISs far exceeds state-reporting requirements, the range of possible dashboards far exceeds what would be possible with only the data reported to the state. Furthermore, the dashboards will be dynamic: that is, they will be automatically updated as districts change their SIS data, or at intervals controlled by the districts. What this means is that, when completed, the new data system will usher into the 21st century the provision, management, and utilization of education data among Texas K12 districts to improve practice.

The centralized store of district SIS data will be the source of the state-required data used for accountability purposes by TEA, thereby relieving districts of the burden of collecting and submitting state-required data that are housed in district SIS systems. State ad-hoc requests of district SIS data can be extracted automatically from the District Connections Database subsequent to any necessary legal notifications and approvals.

Short-term Action 3.b.v: Expand TexShare – Estimated Savings

TexShare provides efficiencies in access to electronic resources through statewide licensing agreements, interlibrary loan services, preservation, etc. The total expenditures for university libraries in FY2009 were \$111.2 million, including \$6.3 million for TexShare services to academic libraries. Total expenditures in 2009 *not* including TexShare were approximately \$104.9 million (\$111.2 million - \$6.3 million).

This estimate is based upon reductions in costs of academic libraries by further leveraging statewide licenses and additional services through TexShare. The initial projected savings is assumed to be 2.5 percent and increases to 10 percent in the fourth year, resulting in a total savings of \$26.2 million.



YEAR	PROJECTED INCREASE IN SAVINGS	ESTIMATED ANNUAL SAVINGS (FY2009)	ESTIMATED ANNUAL SAVINGS (CTG)
01	2.5%	\$2,623,218	\$3,075,035
02	5.0%	\$5,246,436	\$6,150,070
03	7.5%	\$7,869,655	\$9,225,105
04	10.0%	\$10,492,873	\$12,300,140
TOTAL		\$26,232,182	\$30,750,350

Short-term Action 3.b.iv: Expand TexShare – Current State Practices

The **Connecticut State Library** in conjunction with the Connecticut Department of Higher Education has implemented **iCONN**, a common set of information resources available to every citizen in Connecticut. Specialized academic and research resources are available only to college students and faculty. iCONN can be accessed from any citizen’s personal computer within state boundaries without any sign-in, and from any public library, and any public or private school in the state.

The cost savings of iCONN are substantial. The Connecticut legislature allocates \$2 million dollars per year toward the cost of cataloging and licenses to the digital databases. According to iCONN, if every library, school, and college were to purchase the same databases on their own, the aggregate annual cost would exceed \$35 million, resulting in an annual estimated savings of \$32 million.⁶⁵

The Connecticut Digital Library was awarded a Certificate of Commendation from the Affiliate Assembly of the American Association of School Librarians, a division of the American Library Association. The Certificate was awarded “in recognition of valuable contributions to the field of school librarianship.”

Another notable statewide effort is **The Partnership Among South Carolina Academic Libraries (PASCAL)**, which fosters cooperation among state institutions and agencies on a broad range of issues including shared licensing of electronic resources, universal borrowing, and integrated library system hosting. PASCAL costs the state about \$2 million a year, resulting in annual savings of approximately \$8.2 million relative to the

⁶⁵ See <http://www.iconn.org/staff/CostSavings.aspx>.



total cost of over \$10.2 million necessary to support each library separately in the absence of the partnership.⁶⁶

⁶⁶ See www.pascalsc.org.



APPENDIX B

RP73 - Relating to a comprehensive review of higher education cost efficiencies.

September 09, 2009

BY THE GOVERNOR OF THE STATE OF TEXAS *Executive Department*

Austin, Texas September 9, 2009

Relating to a comprehensive review of higher education cost efficiencies.

WHEREAS, students, parents and taxpayers must be assured of the greatest value for the investment they make in higher education; and

WHEREAS, Texas has made great progress in expanding higher education opportunities to more young Texans; and

WHEREAS, Texas' higher education funding system must continue to improve to keep pace with changes in the global economy and the modern marketplace; and

WHEREAS, the State of Texas is entrusted by the taxpayers to ensure that public institutions of higher education are operating efficiently; and

WHEREAS, while Texas public institutions of higher education are giving attention to containing costs, the state would benefit from a systematic and comprehensive effort to save taxpayer dollars while sustaining and improving quality; and

WHEREAS, the state budget for higher education has increased by \$9.3 billion in the past decade, and institutions of higher education currently consume 12.4 percent of the state's budget;



NOW THEREFORE, I, RICK PERRY, Governor of the State of Texas, by virtue of the power and authority vested in me by the Constitution and the laws of the State of Texas, do hereby order the following:

The Texas Higher Education Coordinating Board, in cooperation with Texas public institutions of higher education, shall undertake a broad and comprehensive review of system-wide opportunities for achieving cost efficiencies, including, but not limited to:

- ▶ state funding based on student course completion;
- ▶ restructuring the state's financial aid programs to improve administrative efficiencies and to provide financial aid to students who work hard to academically prepare for college;
- ▶ academic program consolidation and elimination of programs that produce relatively few graduates;
- ▶ faculty workload;
- ▶ articulation agreements between two-year and four-year institutions
- ▶ distance learning;
- ▶ alternatives to creating new campuses;
- ▶ course redesign to improve quality and reduce instructional costs for more courses;
- ▶ cooperative, cross-system contracting and purchasing
- ▶ space utilization;
- ▶ energy use; and
- ▶ cost of instructional materials.

In addition, the Texas Higher Education Coordinating Board shall conduct a review of higher education cost efficiencies implemented in other states and other countries.

Based on the findings of this review, the Texas Higher Education Coordinating Board shall develop practices, policies and recommendations for cost-containment among public institutions of higher education in Texas and submit these practices and policies to the governor, the legislature and public institutions of higher education by November 1, 2010.



This executive order supersedes all previous orders in conflict or inconsistent with its terms and shall remain in effect and in full force until modified, amended, rescinded, or superseded by me or by a succeeding Governor.

Given under my hand this the 9th day of September, 2009.

RICK PERRY (Signature)

Governor

Attested by:

ESPERANZA “HOPE” ANDRADE (Signature)

Secretary of State



Texas Higher Education Coordinating Board
ADVISORY COMMITTEE ON HIGHER EDUCATION COST EFFICIENCIES

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Thursday, December 3, 2009

DETAILED AGENDA

1:30 p.m. Welcome and Introductions

**1:45 p.m. Overview of the Governor's Executive Order RP 73,
Relating to a Comprehensive Review of Higher Education
Cost Efficiencies**

♦ **Three topical groups:**

- Outcomes-based Funding
 - State funding based on student course completion
 - Restructuring the state's financial aid programs to improve administrative efficiencies and to provide financial aid to student who work hard to academically prepare for college
- Academic Productivity and Efficiency
 - Faculty workload
 - Distance learning
 - Alternatives to creating new campuses
 - Course redesign to improve quality and reduce instructional costs for more courses
 - Articulation agreements between two-year and four-year institutions
 - Academic program consolidation and elimination of programs that produce relatively few graduates
- Facilities and Operations
 - Space utilization
 - Energy use
 - Long-term facilities



- Deferred maintenance funding
- Cooperative, cross-system contracting, and purchasing
- Cost of instructional materials

♦ **Mission of Advisory Committee:**

- Develop consensus on 3-5 highest priority, actionable recommendations
- Develop a process/measures for institutions to continue examining/implementing best practices and engaging in cost efficiencies

♦ **House Interim Committee Charges**

2:00 p.m. Commissioner of Higher Education’s Comments on the Committee charge

2:15 p.m. Discussion of Study Areas

♦ **Define each topic**

- Ask higher education committee members to provide examples of current cost efficiencies
- Ask business representatives to provide examples of business practices that increase cost efficiencies
- What other topics/areas of study should be added to the committee’s scope of work?

3:00 p.m. Break

3:15 p.m. Committee Organization

♦ **Meeting schedule (once a month at THECB offices in Austin from 10:00 a.m. – 3:00 p.m.)**

♦ **Meeting format**

- Agenda
 - Housekeeping items (e.g., adoption of meeting minutes)
 - Presentations by subject matter experts (maximum of 3 topics per meeting/45 minutes per topic)
 - 30 minute lunch
 - 1 hour for discussion, consensus of priorities, next meeting

♦ **Three resource work groups – led by CB staff and comprised of institutional and business liaisons**

♦ **Agenda materials sent to committee members at least one week in advance of each meeting; indicate preference (electronic vs. hard copy)**



4:00 p.m. Summary and Next Steps

- ♦ **Discussion of January Meeting – focus on outcomes-base funding; invite Carl Peister (University of California System), Michael Crowe (Arizona State University), and representative from Ohio Board of Regents**
- ♦ **Public website for work of the committee, including a password protected website for committee members to access copyrighted materials**
- ♦ **Primary contact person: David Gardner, Deputy Commissioner for Academic Planning and Policy, 512.427.6155, David.Gardner@theccb.state.tx.us**

4:30 p.m. Adjournment

4:35 p.m. Reception



Texas Higher Education Coordinating Board
ADVISORY COMMITTEE ON HIGHER EDUCATION COST EFFICIENCIES

1200 East Anderson Lane, Austin, Texas
Board Room (2.140)

January 12, 2010
10:00 a.m. to 3:00 p.m.

AGENDA

- 10:00 a.m. Welcome and Comments on the Committee's Charge
- ▶ Fred W. Heldenfels, Chair of the Committee
 - ▶ Raymund A. Paredes, Commissioner of Higher Education
- 10:15 a.m. Approval of Summary Minutes from the December 3 Meeting
- 10:20 a.m. Study of What Stakeholders Think About Controlling College Costs
- ▶ John Immerwahr, Professor, Villanova University, and Senior Research Fellow, Public Agenda (confirmed, will participate by web)
- 10:50 a.m. Questions, Answers, and Discussion of Studies of Stakeholder Groups
- ▶ John Immerwahr and Members of Committee
- 11:20 a.m. Trends in College Spending:
Where does the money come from? Where does it go?
- ▶ Jane Wellman, Executive Director, The Delta Project on Postsecondary Education Costs, Productivity, and Accountability (confirmed, will participate by web)
- 12:00 p.m. Lunch
- 1:00 p.m. Report on Current Cost Efficiency Efforts at Texas Public Institutions and Recommendations from Institutions on Critical Statewide Cost Saving Efforts



- ♦ **Gary Johnstone, Deputy Assistant Commissioner for Planning and Accountability, Texas Higher Education Coordinating Board (confirmed)**

1:15 p.m. Recommendations of Cost Efficiencies Based on Analysis of Studies from Other States

- ♦ **Lee Holcombe, Director, Higher Education Policy Institute (confirmed)**

1:30 p.m. Committee Discussion

2:40 p.m. Summary of Short- and Long-Term Solutions

2:50 p.m. Planned/Proposed Topics and Speakers for Future Meetings

3:00 p.m. Adjournment



Texas Higher Education Coordinating Board
ADVISORY COMMITTEE ON HIGHER EDUCATION COST EFFICIENCIES

1200 East Anderson Lane, Austin, Texas
Board Room (2.140)

February 9, 2010
10:00 a.m. to 3:00 p.m.

AGENDA

Meeting Focus: Outcomes-based Funding

- 10:00 a.m. Welcome and Chair's and Commissioner's Comments
- ✦ Fred W. Heldenfels, Chair of the Committee
 - ✦ Raymund A. Paredes, Commissioner of Higher Education
- 10:10 a.m. Approval of Summary Minutes from the January 12 Meeting
- 10:15 a.m. Perspectives on Efficiency
- ✦ Dennis Jones, President, National Center for Higher Education Management Systems
- 10:30 a.m. Funding Based on Course Completions and the Ohio Model
- ✦ Rich Petrick, Vice Chancellor, Ohio Board of Regents
- 10:50 a.m. Questions, Answers, and Discussion of Ohio Model
- ✦ Rich Petrick and Members of Committee
- 11:10 a.m. Financial Aid Models
- ✦ Cheryl Blanco, Vice President for Special Projects, SREB
- 11:30 a.m. Questions, Answers, and Discussion of Financial Aid Models
- ✦ Cheryl Blanco; Dan Weaver, Assistant Commissioner for Business and Support Services, Texas Higher Education Coordinating Board
- 11:50 a.m. Transfer and Articulation Agreements Between Two- and Four-Year Institutions



- ▶ **David Spence, President, Southern Regional Education Board (via conf. call)**

12:10 p.m. Questions, Answers, and Discussion of Transfer and Articulation Agreements

- ▶ **David Spence and Members of Committee**

12:30 p.m. Lunch

1:30 p.m. Small Group Discussions

2:30 p.m. Committee Discussion

3:00 p.m. Adjournment



Texas Higher Education Coordinating Board
ADVISORY COMMITTEE ON HIGHER EDUCATION COST EFFICIENCIES

1200 East Anderson Lane, Austin, Texas
Board Room (2.140)

March 9, 2010
10:00 a.m. to 3:00 p.m.

AGENDA

Meeting Focus: Academic Productivity and Efficiency

- 10:00 a.m. Welcome and Chair's and Commissioner's Comments
- ▶ Fred W. Heldenfels, Chair of the Committee
 - ▶ Raymund A. Paredes, Commissioner of Higher Education
- 10:10 a.m. Approval of Summary Minutes from the February 9 Meeting
- 10:15 a.m. Faculty Productivity
- ▶ William Massy, Professor Emeritus of Education and Business Administration and former Vice President for Business and Finance, Stanford University
- 10:35 a.m. Questions, Answers, and Discussion of Faculty Productivity
- ▶ William Massy and Members of Committee
- 11:00 a.m. Using Information Technology to Transform Teaching and Learning in Higher Education
- ▶ Carolyn Jarmon, Senior Associate, National Center for Academic Transformation
- 11:20 p.m. Questions, Answers, and Discussion of Using Information Technology to Transform Teaching and Learning in Higher Education
- ▶ Carolyn Jarmon and Members of Committee



- 11:45 a.m. Distance Learning, Course Design, Reducing Program Costs, and Alternatives to New Campuses**
- ▶ **Jorge Klor de Alva, Senior Vice President, Academic Excellence, University of Phoenix**
- 12:05 p.m. Questions, Answers, and Discussion of Distance Learning, Course Design, Reducing Program Costs, and Alternatives to New Campuses**
- ▶ **Jorge Klor de Alva and Members of Committee**
- 12:30 p.m. Lunch**
- 1:30 p.m. Small Group Discussions**
- 2:30 p.m. Committee Discussion**
- 3:00 p.m. Adjournment**



Texas Higher Education Coordinating Board
ADVISORY COMMITTEE ON HIGHER EDUCATION COST EFFICIENCIES

1200 East Anderson Lane, Austin, Texas
Board Room (2.140)

April 13, 2010
10:00 a.m. to 3:00 p.m.

AGENDA

Meeting Focus: Facilities

- 10:00 a.m. Welcome and Chair's and Commissioner's Comments**
- ▶ **Fred W. Heldenfels, Chair of the Committee**
 - ▶ **Raymund A. Paredes, Commissioner of Higher Education**
- 10:10 a.m. Approval of Summary Minutes from the March 9 Meeting**
- 10:15 a.m. Facilities Development and Management of Deferred Maintenance**
- ▶ **Charles Matthews, Former Chancellor, Texas State University System**
 - ▶ **Peter Graves, Associate Vice Chancellor for Contract Administration, Texas State University System**
 - ▶ **Guy Bailey, President, Texas Tech University**
- 10:40 a.m. Questions, Answers, and Discussion of Facilities Development and Management of Deferred Maintenance**
- ▶ **Charles Matthews, Peter Graves, Guy Bailey, and Members of Committee**
- 11:00 a.m. Capital Budgeting and Funding for Facilities**
- ▶ **Harvey Kaiser, President and Founder, Harvey H. Kaiser Associates, Inc.**
- 11:30 a.m. Long-Term Private Capital Financing Models**
- ▶ **Cecil Phillips, Chairman and CEO, Place Properties, Atlanta, Georgia**



12:00 p.m. Questions, Answers, and Discussion of Long-Term Private Capital Financing Models and Capital Budgeting and Funding for Facilities

▶ **Harvey Kaiser, Cecil Phillips, and Members of Committee**

12:30 p.m. Lunch

1:30 p.m. Small Group Discussions

2:15 p.m. Committee Discussion

3:00 p.m. Adjournment



Texas Higher Education Coordinating Board
ADVISORY COMMITTEE ON HIGHER EDUCATION COST EFFICIENCIES

1200 East Anderson Lane, Austin, Texas
Board Room (2.140)

May 11, 2010

9:30 a.m. to 3:30 p.m.

AGENDA

Meeting Focus: Operations and Procurement

- 9:30 a.m. **Welcome and Chair's and Commissioner's Comments**
- ✦ **Fred W. Heldenfels, Chair of the Committee**
 - ✦ **Raymund A. Paredes, Commissioner of Higher Education**
- 9:40 a.m. **Approval of Summary Minutes from the April 13 Meeting**
- 9:45 a.m. **Economic Issues in American Education**
- ✦ **Richard Vedder, Distinguished Professor of Economics, Ohio University**
- 10:05 a.m. **Questions, Answers, and Discussion of Economic Issues in American Education**
- ✦ **Richard Vedder and Members of Committee**
- 10:30 a.m. **The Maryland Model for Funding Higher Education**
- ✦ **William E. Kirwan, Chancellor, University System of Maryland**
- 10:50 a.m. **Questions, Answers, and Discussion of The Maryland Model for Funding Higher Education**
- ✦ **William E. Kirwan and Members of Committee**
- 11:15 a.m. **Electronic Textbooks**
- ✦ **Karim Meijer, Student Regent, Board of Regents, The University of Texas System**



- 11:30 a.m. Lean Management at The University of Texas at Dallas**
- ♦ **Calvin Jamison, Vice President for Business Affairs, The University of Texas at Dallas**
- 11:40 a.m. Other Successful Cost Efficiency Efforts at The University of Texas System Institutions and Texas A&M University System Institutions**
- ♦ **Scott Kelley, Executive Vice Chancellor for Business Affairs, The University of Texas System**
 - ♦ **Mike McKinney, Chancellor, Texas A&M University System**
 - ♦ **Members of Committee**
- 12:00 noon Successful Cost Efficiency Efforts at Texas Community Colleges**
- ♦ **Richard Rhodes, President, El Paso Community College, and Chair of the Executive Committee, Texas Association of Community Colleges**
 - ♦ **Bruno Biasiotta, Vice President and General Manager, Solutions, Johnson Controls Inc.**
 - ♦ **Stephen Head, President, Lone Star College-North Harris**
- 12:20 p.m. Questions, Answers, and Discussion of Electronic Textbooks, Lean Management, and Successful Cost Efficiency Efforts at Texas Public Institutions of Higher Education**
- ♦ **Karim Meijer, Calvin Jamison, Scott Kelley, Mike McKinney, Richard Rhodes, Bruno Biasiotta, Stephen Head, and Members of Committee**
- 1:00 p.m. Lunch**
- 1:45 p.m. Small Group Discussions**
- 2:45 p.m. Committee Discussion**
- 3:30 p.m. Adjournment**

